AMERICAN CINEMATOGRAPHER

The Motion Picture CAMERA Magazine

25c

this issue

- Light Requirements for Color
- Is Color Revolutionizing Photography?
- Shooting from Fifty Below Zero
- Universal Emphasizes Cinematography
- A.S.C. Members on Parade
- . . . and other features

JULY,
1936

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Volume 17 July, 1936 Number 7

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Next Month

- We already have prepared a very comprehensive article on the new R.C.A. method of recording. This is said to be revolutionary and is interesting many of the major studios.

- Also there is a very fine article by Max Factor on make-up for color pictures. This is important for those who are to shoot color in movies. It has been found that make-up has a definite influence and must be correctly applied.

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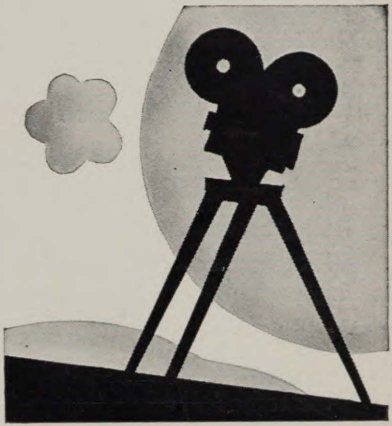

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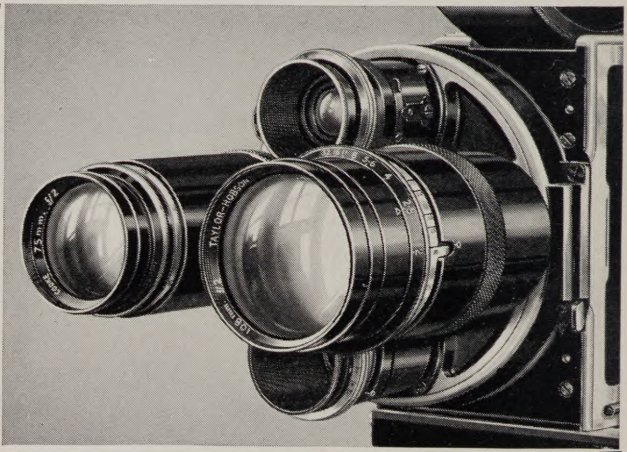

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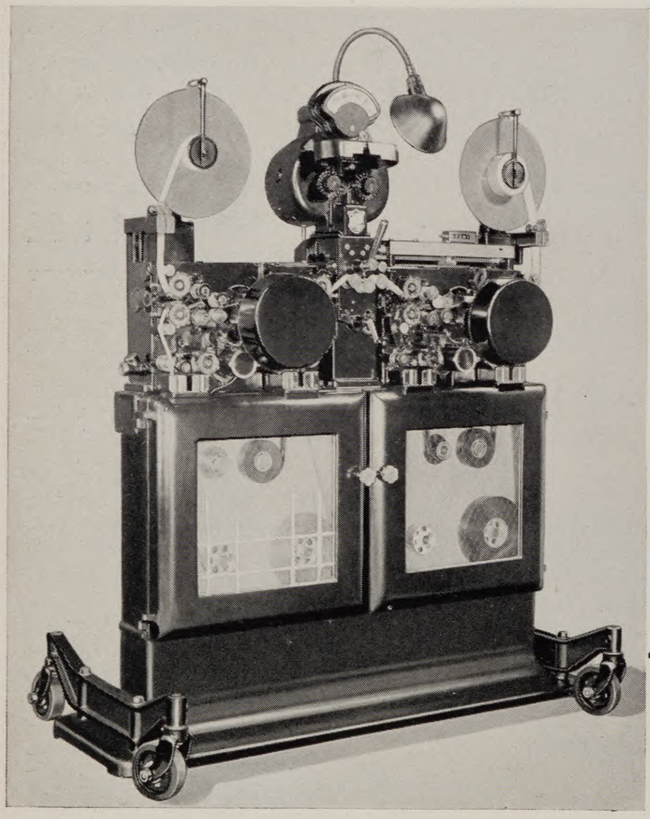

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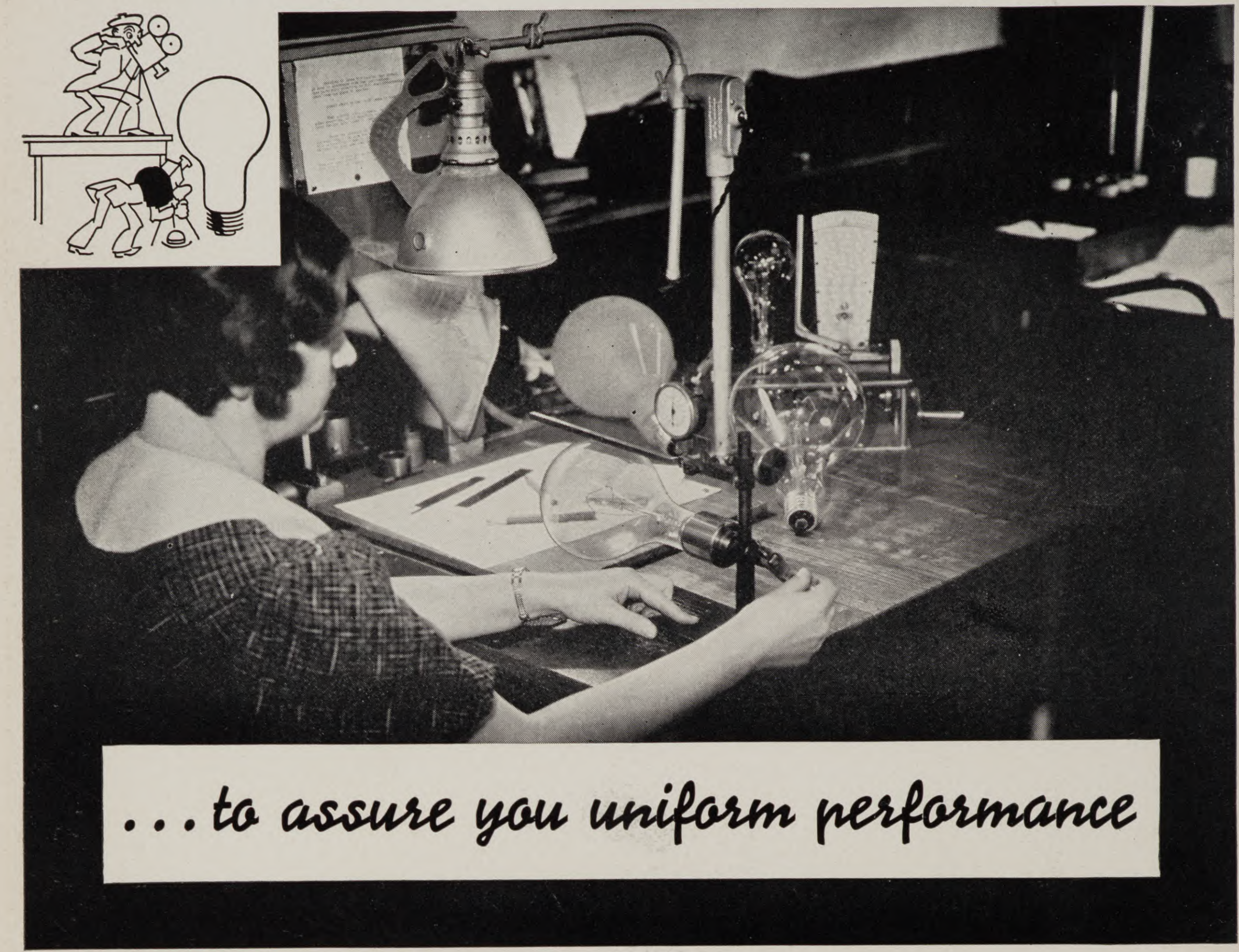
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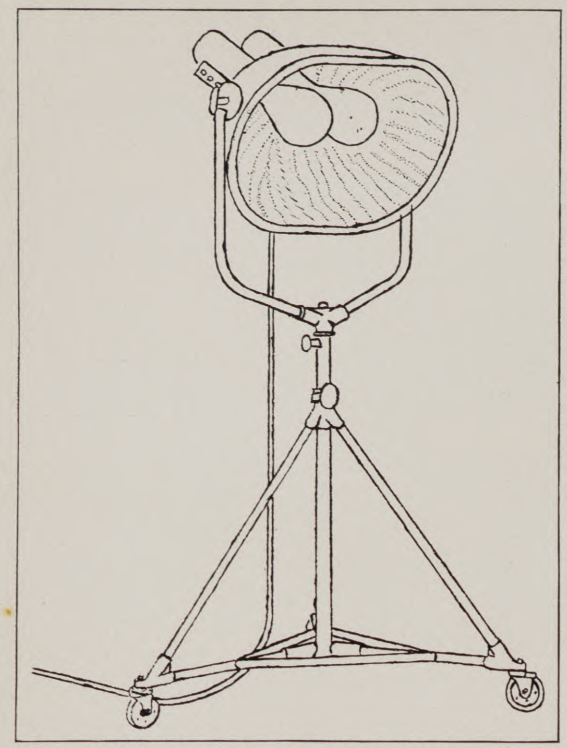
Lighting



A recommended design of a compact general lighting unit employing two 2000 watt Moviefloods. These equipments, with associated filters, are fully equal in illuminating power to any other general lighting source of equal wattage.

Editor's Note: This article by Mr. Farnham was prepared by him as a semi-sales argument for Mazda lamps. However, it contains vital information on lighting Technicolor pictures and for that reason we are reprinting the major part of his brochure.

THE TECHNICOLOR FILM, camera, and subsequent processing have been designed for a photographic light having substantially equal quantities of red, green, and blue radiation. This has been done so that pictures can be made with daylight as well as with artificial light and daylight mixed.

Since the color of the white flame arc closely approximates that of daylight, it has sometimes been assumed that this source was essential for Technicolor photography.

The characteristics of the Technicolor process are such as to require approximately two and one-half times the illumination level necessary for black and white photography.

The light emitted by Mazda lamps contains a considerably greater proportion of red-yellow and even of green, than of blue-violet. To attempt to filter out the excess red and green radiation of the usual studio lamps to secure a balance of these three colors would result in excessive losses and unduly high wattages would be necessary. It is a characteristic of the incandescent source that as the efficiency or filament temperature is increased, the amount of blue-violet radiation increases in a much greater ratio than red and yellow, producing a markedly whiter light. Advantage has been taken of this fact by making available the standard group of motion picture studio lamps in a special rating of much higher efficiency and of constant color temperature (3380° K). Even in these high-efficiency lamps, there is still some excess of the warmer colors and a moderate amount of filtering to secure equal quantities of red, green, and blue, is necessary. However, this operation at increased efficiency greatly reduces the filter losses and minimizes the wattage necessary.

The color correcting filter may be placed either at the camera lens or in front of the lighting equipment. The latter arrangement is the one most generally employed for studio photography because it is thus possible to mix the incandescent light with daylight as a "booster" light, or with the arc. Furthermore, the glass filter incorporates a certain amount of infra-red or heat absorption properties, thus reducing the temperature within the set and contributing greatly to the comfort of the artists.

Suitable filtering material is available either in the form of glass or gelatin. The glass filters have the advantage of a more accurate color correction and absolute permanence of their filtering characteristics. The gelatin (No. 26 Brigham) is much lighter in weight and lower in cost, but fades, and therefore must be renewed rather frequently. The heat absorption properties of the gelatin are practically nil.

The glass employed, both by Corning (Lunar White No. 570) and Libbey-Owens-Ford (Medium Blue), is heat resisting and cover doors can be made of a single piece of glass. This results in lessened liability to breakage as compared with the more usual arrangement of using strips. The Libbey-Owens-Ford material has been further heat treated so as to make it almost unbreakable. However, should it be broken, the entire piece instantly becomes a rock-salt appearing substance and there are no large sharp-edged falling pieces to endanger people below.

These glass filters, either mounted or unmounted, can be rented or purchased from the lighting equipment manufacturers.

In order to produce the higher efficiency and whiter light from the lamps heretofore used for motion picture photography, it is necessary to operate them at a voltage about ten percent (10%) above their rated volts. Since it is not always practicable to raise the voltage this amount on the sets, the General Electric Company has made available, lamps of 105 volts rating which, when operated on 115 (the generally prevailing voltage on the set) will give the correct color quality after it has been transmitted through filters. These lamps have the same list price as the regular types, and of course are interchangeable with them in the various lighting units.

As mentioned before, the Technicolor process requires at least two and one-half times as much light as the minimum for black and white photography—illumination of the order of 750 footcandles and higher. Good quality in color photography requires that some degree of shadow formation and modeling of the faces be produced by the general lighting equipments as well as the "spots". This effect is difficult of attainment where widespread distribution of large numbers of units prevails, and calls for the more general use of lamps of high wattages, as well as the most efficient types of equipments.

The well-known "rifle" units with the 2000 watt Movie-flood lamp is a very effective unit for general illumination. It can be used from the floor, mounted on the camera dolly, on the parallels, or hung overhead in clusters from suitable suspension arrangements, to provide illumination from overhead.

In certain types of sets there may be insufficient space to place the requisite number of general lighting units ("rifles"). Therefore, a so-called "double rifle" has been developed. This unit employs two of the 2000 watt PS-52 Movie-flood lamps and occupies only slightly more space than the one lamp rifles and about the same as the arc

Requirements of the Three-Color Technicolor Process

by
R. E. Farnham
General Electric Co.

broadsides. Its light distribution is somewhat greater horizontally than vertically, providing extremely efficient utilization of light on the set. These units, with associated filter, are fully equal in illuminating power to any other general lighting source of comparable voltage. In some photographic tests on a small set they were immediately dubbed "dynamite". A sketch of the unit appears at the end of this bulletin.

For modeling lighting services, the new Junior Solar Spot employing the 2000 watt G-48 bulb lamp, and the larger Senior Spot unit with its 5000 watt G-64 bulb lamp, are excellent medium-power sources. They are compact and relatively light in weight, and can be put in all manner of places—under tables, behind posts, permitting lighting effects not otherwise obtainable. For beam spreads of less than 12 degrees, the 24 inch Sunspot with the 5 Kw. lamp produces even higher intensities than the Solar Spot of similar wattage.

For the high power spotlighting, there is available the big 36 inch Sunspot with the 10 Kw. G-96 bulb lamp. This unit has already been successfully employed in producing an effect of shafts of sunlight in recent Technicolor productions.

Where it is desirable to reduce the numbers of units and produce still higher levels of illumination, there are available lamps of 30,000 and 50,000 Watts rating. Recent progress in the development of high wattage lamps, such as the use of the bipost construction, and means for the prevention of blackening, make entirely practicable the manufacture of lamps of even higher power. New methods of treating aluminum surfaces have made possible reflectors of almost any size, possessing highly accurate contour and an efficiency of reflection comparable to that of silvered glass. Of greatest importance is the fact that these surfaces are permanent, being very hard, resistant to both abrasion and oxidation. This development makes practicable relatively light weight units for these big lamps.

In order to check the practicability of using Mazda lamps and the several recommended types of filters for Technicolor photography under actual studio conditions, a number of scenes including close ups, medium and long shots, were photographed, in which Mazda lamps were used exclusively. Other scenes were taken in which Mazda lamps were mixed with arcs. The finished picture demonstrated that with incandescent lamps all colors were reproduced with high fidelity, particularly the whites. It is well known that some difficulty has been experienced in securing clear whites when other sources are used. Flesh tones were natural. The results indicated that the incandescent source is also particularly adaptable as a booster light for out-of-doors shots.

Set Temperatures

Owing to the higher lighting intensities required for color motion picture photography, fears have been expressed that the use of Mazda lamps might result in discomfort to the personnel. The lesser amount of the infra-red radiation of the arc, as compared to the better-known types of incandescent lamps, has been cited as a reason for considering this source for high levels of illumination. An analysis is interesting.

The energy entering an incandescent lamp of the usual studio lamp (21.0 Lumens per Watt) is expended as follows:

Heat-Gas Convection	20%
Heat Losses in supports and lead wires	5%
Radiant Heat	64%
Light	11%

In the case of lamps of an efficiency of 33.0 Lumens per Watt, as recommended for Technicolor photography, these figures become:

Heat-Gas Convection	20%
Heat Losses in supports and lead wires	5%
Radiant Heat	57.3%
Light	17.7%

The heat losses by gas convection and in the lead wires and supports are of no importance since they affect only the lamp bulb and adjacent parts. Of the radiant energy reaching the actors, 85.3% in the case of lamps used for black and white photography, is in the infra-red or heat region. This is reduced to 76.5% for the 33.0 Lumens per Watt lamps—a definite improvement. Both types of glass filters mentioned previously possess some degree of infra-red energy absorption which still further reduces the above percentage.

In a recent paper, published in the Journal of the Society of Motion Picture Engineers, by F. T. Bowditch of the National Carbon Company, entitled "Radiant Energy Delivered on Motion Picture Sets from Carbon Arc Studio Light Sources", the division of energy between photographic and infra-red is given for several types of studio arcs. In general these data show 30-35% photographic energy, 30-35% near infra-red (7000-14000 A) and 30-35% in the far infra-red (14000-50000 A) or 60-70% in the entire infra-red zone. Thus, the heat from the high efficiency Mazda lamps is not out of line with that of the arc.

Operating Considerations

In order to derive the full benefit from incandescent lighting and to insure maintenance of correct light quality, lamps should be operated at 115 volts at the socket. It is suggested that a portable voltmeter be made available at the set, and the voltage checked from time to time, particularly with changes in the load. The 5 and 10 Kw. lamps incorporate an abrasive cleaning powder which is effective in maintaining almost initial light output throughout the life of the lamp. It should be someone's responsibility, presumably the gaffer's, to see that these lamps are cleaned at approximately 10-15 hour burning intervals.

Due to their high efficiency of operation, the life of lamps employed for Technicolor photography is necessarily shortened. To conserve their life, it is recommended that they be burned no longer than necessary; as is the case with arc lighting where retrimming is a factor. It might be a very good plan to make available at the set, a lower voltage at which the lamps may be operated for "lining up", general illumination, etc. Then bring them up to full voltage when ready to photograph. Discussion with studio electrical chiefs has brought out that this is frequently feasible, either by providing a lower voltage (say 90 volts) on the duplicate bus at the substation, or assigning one generator to the Technicolor set, and adjusting its voltage upon signal by field control. Experience may very likely

Continued on page 292

Will Color

IF ONE is to believe half the rumors encountered both in and out of print today, the title of this article should be not "Is Color to Revolutionize the Industry?", but "When is It Going to Do So?" The release of "Becky Sharp" started everyone to thinking about color; the success of "Trail of the Lonesome Pine" seems to have clinched matters. Sensationalists and conservatives seem equally enthusiastic about the future of color, and many predictions are being made that from one to three years hence, a black-and-white feature will be a novelty.

These opinions bring to mind similar statements issued at irregularly recurring intervals as far back as 1861, when Clerk Maxwell, in his classic experiment before London's Royal Institute, laid the foundations of color photography.

Maxwell's experiment was, viewed by today's standard, absurdly simple. He simply made three still photographs of an object—one through a blue filter, one through a green filter, and one through a red filter—and then projected lantern-slide positives of the three one on top of the other, each filtered by its appropriate filter, and re-created the original colors of the object. Crude as the experiment was, it was hailed as marking a new era in the history of photography.

I suppose that the first time these phrases were used in connection with motion picture color was back in the late 1890's, when Robert Paul exhibited a seven-reel production of "The Miracle", hand-colored in every one of its 112,000 frames.

The truly photographic color processes didn't get any widespread praise until Kinemacolor, in 1912, startled the world with flickery, two-color additive scenes of the Coronation of George V and the Durbar. Then the epoch-hailers made up for lost time.

Again, between 1920-22, Prizma, with a two-color subtractive system again set the Industry's tongues wagging. This culminated in Commodore Blackton's English-made "The Glorious Adventure", which was released late in 1922.

In January, 1923, the first really commercial color feature, "The Toll of the Sea," was released by Metro-Goldwyn-Mayer. It marked the debut of the Technicolor process. Originally, this had been an additive process calling for a great deal of special projection equipment; but in its subtractive version, Technicolor gave the critics of that day something really worth praising.

In 1924, a Paramount unit took the daring step of making an outdoor picture in color; "The Wanderer of the Wasteland" (story by Zane Grey, color by Technicolor) started another journalistic rush to the color bandwagon. But the producers somehow didn't join the rush.

Again, about two years later, Douglas Fairbanks, after many conferences and special price arrangements, made "The Black Pirate" in Technicolor. Fairbanks used really excellent taste in his handling of color, and the production not only drew critical raves, but stood for many years as color's crowning achievement.

It was not until 1928 that color made a really substantial entry into the picture business—and then it was not because the industry really wanted color.

Warner Brothers had made a clean-up by introducing sound, and someone sold them the idea that a new gold-rush could be started by beating the field with the first all-color-all-talking feature. As a result, Warner Brothers—and nearly every other producing company—went headlong into color and contracted for millions of feet of Technicolor, not only for the current season's programme, but for years in advance.

The years 1928 and 1929 saw many features made in color. There is little need to talk about them, for probably half the members of the A.S.C. had the misfortune to contact color during those frenzied days. It is said that 77,000,000 feet of color went through the Technicolor plants alone, sadly overstraining their limited capacity. So great was the rush to get out color prints that many unbelievably bad ones found their way into circulation, and the color-boom died a-borning, to remain unburied until Technicolor's three-color process and Disney's "Three Little Pigs" started the revival which today has every major producer of Hollywood and England either begging for Technicolor cameras—or wondering where he can get himself a substitute.

There is a very definite reason for these more recent color cycles since "The Toll of the Sea". In the early days, color's negative cost was about seven times that of black-and-white. A tremendous amount of lighting equipment was required. Release-prints cost about twenty cents a foot—and were not readily available, even at that price. So for years a color picture was a luxury, and only an occasional producer could afford one.

By 1928, slim business and technical improvements had combined to make color more economical. Photography had been improved to a point where a color unit could keep within shouting distance of a black-and-white troupe's efficiency. Technicolor had developed its imbibition process of printing, and release-print prices dropped to about ten cents a foot. The Industry had plenty of money to burn, and color looked like a profitable way to spend it.

Then came the depression. The producers began to curtail expenses, and the first thing to feel the knife was the luxury of color. The producers asked for cancellation of their color-contracts; next they tried to postpone indefinitely the starting of pictures which their contracts forced them to make. (It is reported that more than a few of today's projected color-specials are being made under extensions or revisions of these same 1928 contracts.)

The producers also began to realize that in pushing the cause of color they had been building up an industry in which they had no direct interest or control. The color-product of every studio in the Industry had to pass through the "bottle-neck" of a single centralized color-plant which was utterly beyond the control of even the most powerful studio-head. This possibility of monopolistic control hastened the trend away from color. Everyone kept away from color as they would from a plague.

In time, the depression had a two-fold result. At first, it was in order to reduce production expenses that color was dropped. But as the depression bit deeper, executives began to wonder if the novelty of color might not draw the people back into the theatres.

Today, the success of "Trail of the Lonesome Pine", which is ringing up astonishing grosses everywhere, is jolting the industry into a new awareness of color.

Furthermore, with the ever-present threat of commercial television, color seems an excellent ace in the hole, for no matter how soon television may come, it is certain that it will be many, many years before pictures can be televised in color.

What have we, then, available to fill this growing demand for color?

Speaking for the major studios, there seem to be but two immediate possibilities. The major studio, in the first place, demands first-class color rendition, which presup-

Revolutionize Photography?

by

Howard C. Brown

poses a full three-color process. Economy, ease of operation, and freedom from the domination of a centralized laboratory are also important, but quality results are the heart of the problem.

The Industry's Number One color process is undoubtedly the new three-color Technicolor. This is backed by an organization which for fourteen years has been awaiting just this opportunity. Its results have been shown commercially in three features, many shorts, and several score Disney and Harmon-Ising cartoons. The firm has a number of processing laboratories in operation, another building in England, and has just authorized the expenditure of $1,500,000 for further expansion.

On the other side of Technicolor's ledger must be entered the items of expense and the old bugaboo of a centralized laboratory. Authentic figures as to cost are not at present available, but in an article published rather recently, and apparently with Technicolor's official blessing, it was stated that the added photographic cost for Technicolor over black-and-white for a feature production was approximately $85,000, with probably another $50,000 added to cover the items of slower production, increased electrical consumption, etc., giving a total of about $135,000 more than black-and-white. At present, limited laboratory and equipment facilities are available, and there are only a few trained Technicolor Cinematographers in the world. All of these latter factors are, however, remediable; and the process has proven that in competent hands it gives superb results.

Technicolor's only possible competitor, at this writing, is the Keller-Dorian process. This process is of the additive type, requiring a special filter on the standard camera and projector. For several years it has been under intensive development by the Keller-Dorian and Eastman Kodak researchers; indeed, it is known in some quarters as "Eastmancolor". For the past year or more, the process has been readying for commercial use at the Paramount Studio, under a special, non-exclusive contract; it is understood that it will be generally available to the Industry. The results have not, as yet, been shown commercially, though reports of private showings, and samples which the writer has seen, indicate that it is an excellent, three-color process. The cost, according to recently published and authoritative articles, seems remarkably low. An average feature colored by this method would, it is claimed, cost about $30,000 more than black-and-white. Standard black-and-white cameras and lighting are used, and any black-and-white laboratory can hndle the color-processing with only minor alterations. Its commercial debut should prove a significant step in the history of color.

In addition to the three-color processes mentioned, there are a number of good two-color processes available. Several of these were introduced shortly before the appearance of Technicolor's three-color system, and are greatly in advance of earlier two-tone methods.

The largest of these plants—second as a color laboratory only to Technicolor's establishment—is Cinecolor. This is a bipack process, which permits the use of standard cameras and lighting, and offers excellent two-color results at a cost not greatly in excess of monochrome. Cinecolor develops its own negatives and makes prints on double-coated positive film. As a result of many months of experimentation with dyes, Cinecolor is able to obtain very excellent results. When the firm's new plant is opened, they will be in a position to turn out single-coated prints in both two-color and three-color, and should become an increasingly important factor in the color field.

Consolidated Film Industry's Magnacolor, Dunning's Dunningcolor, and Vericolor are also contenders in the two-color bipack race, and turning out excellent two-color pictures. George Hirliman's Hirlacolor is understood to be an adaptation of the Magnacolor bipack principles.

Several firms and individuals have lately experimented with two-color processes in an attempt to remedy the impaired focus of the rear bipack negative. Dunning-Harrison and Gilmore have both used beam-splitting devices which gave two reduced-size frames on a single film at a single aperture; another experimenter, —— Jones, has used a prismatic beam-splitter to separate the image into two full-sized ones, recorded on the two films at two apertures mounted at right angles.

Considering the foreign field, we find the foreign producer greatly hampered. Most of the processes abroad are either experimental or conversational. In England, while the demand for color is greatly in excess of that here, the British producer must rely upon American processes for immediate results. Technicolor is of course erecting a plant near London, and it is understood that the George Humphries' Laboratory is a Dunning (bipack) licensee. The most important domestic process being used in England is the Friese-Greene process, an additive one controlled by British International Pictures. A new bipack process known as Harmonicolour has recently been introduced, but according to information so far obtainable, this process has an unusually restricted range of color value, and the prints lack considerably in definition. The Gasparcolour process has had some publicity, but according to the meagre information sandwiched between the adjectives, it appears to be essentially a printing process which leaves the problem of producing the negatives up to the customer's ingenuity. Three other processes are being exploited: Raycolour, a two-color additive process; Ondia, a two-color chemical process; and Dufaycolour, a mosaic-screen three-color process familiar to Leica users. The American inventor, Percy D. Brewster, who as early as 1931 produced a one-reel short in his subtractive three-color process, recently sailed to open a color laboratory for Revelation films at Wembley, England.

France, Germany, and a few other continental nations have minor color activities; principally in bipack. Their product, judging by trade-paper foreign reviews, is somewhat inferior.

The only color firm to have expanded toward the Orient thus far is Cinecolor, with a licensee understood to be in operation in the Philippines, and another plant being installed in Bombay, India.

Soviet Russia is understood to be conducting some experiments in color filming, but no authentic reports have as yet reached us as to the progress made by the Russian colorists.

But with the many color processes actively available here and in England, it seems as though color had at last really arrived. Both major and independent producers are announcing imposing lists of color productions for the current season; Technicolor's plant alone has announced that it will process, for this country alone, not less than 19 feat-

Continued on page 294

Shooting Upwards from Fifty Below Zero

by
Clyde de Vinna, A.S.C.

ALL OF US, I imagine, have at one time or another been party to unexpected outbursts in projection rooms when rushes have been screened for critical appraisal. Here's one that should come close to topping the list.

We were filming "Trader Horn" in Africa. Our laboratory and general field base was in the pleasant community of Nairobi. Some four miles distant, in a clearing adjacent to desirable locations was our camp. We had portable electrical equipment, projector and screen. In the balmy cool of early evening, the screen would be suspended from nearby trees and we had a perfect air-conditioned projection room.

In due course, our first rushes came through and all hands gathered about to inspect them. Word of the impending event had spread among the natives and there must have been several hundred of them lurking in the deepening shadows back of us. The screen came to life and we settled back, intently studying our work. As the imaged action became more tense, there came an amused titter from the horde of uninvited guests who were viewing their first movie.

The murmuring wave of subdued chuckles broke into a roar of uproarious guffaws. The jungle reverberated with these howls of unrestrained merriment. The natives had never seen anything so funny in all their lives. The scene would have gladdened the heart of any comedy director.

One venturesome G-stringed buck gave vent to his inborn curiosity and stood on his head to see what the pictures looked like upside down. The results apparently more than justified his anticipations, for he screamed peals of laughter that rang out above the others.

His playmates noted the extra enjoyment that came from his inverted posture and emulated his reverse stance. Their laughter became thunderous. Majestic lions pinned back their ears and sulked deeper into the jungle. Maternal elephants trumpeted their offspring into sheltered retreats. So I am told.

We took our attention from the film and gave eye to our volunteer and responsive audience. What we saw must be one of the most amazing sights of record—two or three hundred natives in an African wilderness, standing on their heads and bellowing with glee. When they could stand it no longer, they toppled over and writhed on the ground in merriment holding their convulsing sides, but yowling their joy. As the old vaudevillians used to say, we surely stood the customers on their heads and laid them in the aisles. Literally.

Radio, also, was new to these dark-skinned boys. They listened to our set the evening it was first hooked up. Next morning I intercepted a party of them armed with shovels. They wanted to dig up and see what kind of a strange wire was used to bring in so unusual sounds. These white men and their quaint contrivances!

Africa is far from being the dank, dark jungle wilderness of sweltering heat that much of the public fancies. There is snow in Africa—year round. And on the equator! Mount Kenye in British East Africa never loses its snow-capped peaks. It's smack on the equator.

But there are more problems photographically in the far North than in the tropics. "Eskimo" was probably the most difficult cinematographic enterprise I have undertaken in all my years of making films in far-off places. We went to Alaska and north from Nome. The temperature was around fifty below—on warm days. It's a bleak, barren, desolate area of ice. Topography is not unlike a monotonous flat plains country. A grey haze settles about the terrain. There is no sky for the fog. Or, in summer months of long days, you get an intense baffling light of tremendous brilliance. Eyes must be shielded from its blinding glare.

Storms break almost without warning. You suddenly find yourself surrounded by a raging blizzard of dense fine snow driven before the wind. Vision extends a few feet. It is out of the question to photograph such a storm of the north expanses. If you try it your negative will look like nothing at all.

Under the low temperature, film gets brittle and will snap apart at very annoying times. All moving camera parts were made entirely dry and clean of lubricating oil, then given a sparse application of sperm oil.

So far as the effects of extreme minus-zero temperature on equipment and film was concerned, this was thoroughly established at the studio prior to our departure. Under the direction of John Arnold, chief executive of Metro-Goldwyn-Mayer's camera department, a huge "cold

Continued on page 291

Clyde de Vinna, A.S.C.

Charles R. Rogers, Executive Vice-President, Universal Studios

Universal Studio to Emphasize Cinematography

by

Charles R. Rogers

APPRECIATING keenly the top-bracket importance of correct cinematography in current motion picture making, one of the first orders issued when I took over the duties as executive vice-president in charge of production at the reorganized Universal studio was the strict mandate "improve photography!"

Steps immediately were launched to bring our forces of equipment and man-power up to high standard. Camera equipment was revamped and brought up to the minute. Lighting facilities were augmented by installation of prevailing units of latest type. Laboratory procedure was perfected to current levels. Work of first water does not come from tools of secondary grade.

I determined to make Universal an opportunity studio for ranking cinematographers, an incentive and challenge to their finest creative talents. There is nothing altruistic about this. It is sound business, and my reasons are logical and simply set forth.

Motion picture theater audiences judge a picture from the first second it flashes on the screen. If introductory titles and the first few scenes are beautifully and effectively photographed and reveal the mood of the story, then the audience immediately relaxes and its enjoyment and appreciation of the film are certain.

If the photography is off key, or lacks quality, the picture gets away to the handicap of indifferent audience regard.

I want and shall insist that every Universal picture have every possible advantage from script to theater. I want fine artistic settings and composition. I want able actors and proper wardrobe. And I am placing every available emphasis on the best photographic achievements to make each frame of a production a beautiful, enjoyable and impressive picture.

To me this seems the very foundation of the picture business. An actor may have a good voice or a poor voice: the recording may be poor: the theater's sound projection unsatisfactory. But if the pictured images on the screen aren't a delight to the eye the picture hasn't a chance in the world of succeeding.

We pride ourselves on excellent recording at Universal. But fine pictorial values are even more essential to screen fortune than fine sound. The art of correct cinematography is one of the greatest miracles of motion pictures.

At Universal we appreciate the artistry of photography and respect the cinematographer as an artist. We are trying to give him every encouragement in obtaining not only photographic quality but also artistic advancement.

To this end, we recently gave a term contract to Hal Mohr, A.S.C., as Director of Photography and as a Director. We gave Mohr this two-way contract to encourage the cinematographic profession to think in terms of production as well as photography. There may be other such contracts in months to come.

We feel that after serving years behind the camera recording dramatic action, the cinematographer should be able to extend his artistry to the direction of players with more feeling, more intimacy, more realism, and a deeper grasp of the immediate problems at hand, than the average director lacking such vital experience.

It should be a matter of direct interest to cinematographers in general to watch the progress Mohr makes in his first directorial assignment. He is entirely sensitive to this obligation and will not embark on this new phase of his career until the right vehicle appears.

Meanwhile, he has given our photography an obvious "lift", as have Merritt Gerstad, Milton Krasner, Joseph Valentine and Norbert Brodine, all A.S.C. veterans. These men are close students of their craft, they are experimenting and progressing, they study actors and their moods. They are called into consultation in preparation of scripts, and together with directors and scenarists evolve new means to keep dialog pictures active and moving; to eliminate the boresome speeches and to select camera perspectives that present the subject in novel but natural and in-key fashion.

Recently we prepared a three-reel picture presenting our new players to our sales convention and later sent the reels to all of our branches throughout the world. Thanks to our new photographic regime, we learned more about

Continued on page 294

DAVID ABEL, A.S.C.

David Abel Evolves New Technique

by
Harry Burdick

FROM THE DAY that microphones became an item of standard studio equipment, proper photography of dancing has presented perplexing problems. True, there has been no scarcity of productions of the song-and-dance variety. But in these, the dance element has consisted largely of animated costumes of increasing magnificence gyrating in sundry geometric patterns and pedaled by elementary examples of footwork. Fast transitory cuts embracing effective camera angles furnish eye-filling pageants.

It remained for David Abel, A.S.C., cinematographically to convey to the screen the full flow of poetry expressed by this art form. And in so doing, he photograaphically pinnacled the great stage dancing star, Fred Astaire, to similar heights of screen popularity.

It is to be expected that he would emerge victorious from this camera conundrum. For Abel is an active member with distinguished record of those hardy pioneers who ministered to the photographic development of the motion picture through its pre-adolescent years of two decades back. He is one of the scant dozen who have survived the increasing demands of the growing technical art over the years to hold high office in the face of today's cinematographic conditions. These seasoned seniors tackle tough jobs with all the calm confidence that is acquired only from long campaigning.

Aworded the first Astaire assignment on "The Gay Divorcee," Abel applied a full measure of cold analysis to the task ahead. If, he reasoned, Astaire could hold a stage audience entranced for three to five minutes by the sheer beauty of his dance, why should he not hold similar interest for a screen audience for a similar uninterrupted period? Why should his artistic offering be carved and served in slices, merely to conform to a general studio practice?

So Abel hit upon the daring but simple solution of filming the entire dance from start to finish and screening it without mechanical interference. In fine, carry the natural beauty, grace and rhythmic flow of physical movement to the screen in complete and unadulterated value. The visual action of the dance would be too vivid for the scene to harbor on static.

As result, Abel takes scenes running up to five hundred feet as screened and no onlooker has yet been known to lose interest.

Lensing of the intricate dance numbers, in solo or with partner, presents specialized problems. How thoroughly Abel has them in control is evidenced by the box-office lure of the exhibited productions.

Astaire develops his dance creation as his imagery dictates. Abel offers no restrictions. Astaire can dance from one end of the stage to the other if he so desires. The star thus has fullest range of artistic expression.

With the dance well rehearsed, Astaire comes to the set for final polishing and timing. This is when Abel goes to work.

Experience reveals it far more satisfactory to have the music in form of a previously recorded playback. This one factor, at least, is stable.

As Astaire runs through his routine, Abel levels his camera on him. In rare instances two or three cameras have been used to offer selection for most effective angles. Mainly, the lens represents a normal point of view, as of an audience witnessing a stage performance. First is noted the area covered by the dance. This varies and may be limited or extensive. Abel now proceeds to bathe this entire area with light. There can be no individual lighting for the star covers too much territory during the scene. This lighting must be absolutely uniform, minus all shadows or luminous spots. It is brilliant as to mood but in key with scenes, preceding and following, which are toned from the dance scene as a base.

Full figure shots are taken, in parlance 'long shots.' There are no cut-in close-ups. Hence the lighting must so be deployed as to cover every gesture, every fleeting expression. They might be termed, for lighting estimation, close-ups of full figures.

Continued on page 293

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A.S.C. MEMBERS ON PARADE

- **Theodore S. Aprakhul, A.S.C.,** has joined the nation's radio favorites. Appearing as special guest artist on the Jack Benny program on Sunday night, June 21. Theodore is receiving various and sundry mail from the crooner fans. Ted is practicing the scales in his bathtub. Thus the airlines are trying to lure another of our Hollywood famous.

- **John Arnold, A.S.C.** and **George Folsey, A.S.C.,** upheld the prestige of the Directors of Photography in the M.G.M. golf tournament Sunday, June 21st by shooting a twin 71. We do not mean a 142. Two men played one ball. (They had a handicap of 18, thank goodness.)

- **Harry Perry, A.S.C.** post cards us that he likes Hollywood better than Vienna, where he is now shooting backgrounds for Goldwyn's production, "Dodsworth". Possibly it's the language that's confusing Harry.

- **Glenn McWilliams, A.S.C.** is now shooting the "Great Barrier" for Gaumont-British in England.

- **Norbert Brodine, A.S.C.** staged a barbecue breakfast on father's day in honor of himself.

- **George Barnes, A.S.C.,** another of Hollywood's bright lights is being tempted by the radio. A week or so ago George appeared on the Lux hour with Cecil B. DeMille. What's this radio going to do to us; the roll call will soon sound like the A.S.C. roster.

- **Kard Freund, A.S.C.** and **Victor Milner, A.S.C.** are both working on pictures that have a Chinese story. Freund on "Good Earth", out at Metro, and Milner in "The General Dies at Dawn", at Paramount. Both of them are going into such things as the Ming Dynasty and other such highbrow topics. Now and then they quote a bit from Confucius.

- Did you note in the late issue of the Saturday Evening Post in the story by an agent that he admits the big stars insist on naming their own cameramen, realizing that the stars are made or broke in the camera . . . a bit of good common sense, says we.

- **Wm. Daniels, A.S.C.** was tempted a short time ago by the radio, but his better sense prevailed. He is back on the cameras. He appeared with Wallace Beery on the Shell Hour.

- **Wm. O'Connell, A.S.C.** is not at 20th Century-Fox as we reported last month, but with Warner Brothers. It just goes to show how hard it is to keep up with fellows like Bill, just bustling around from one studio to another. He was at Fox for about five years and now we suppose in about another four or five years he will get restless and go to some other studio . . . yep, it's a hard job keeping up with fellows like Bill.

- **Hal Mohr, A.S.C.** has returned from Pittsburgh, where he went to secure background shots of the steel mills and other phases of the iron industry. Immediately upon his return his doctor ordered him to take a vacation.

- **Farciot Edouart, A.S.C.** is vacationing somewhere in Yosemite in an effort to forget transparency shots. You'll find him under waterfall No. 73.

- **Phil Chancellor, A.S.C.** just received an associate membership in the Royal Photographic Society of England. It's now Philip Chancellor, A.S.C., A.R.P.S. and F.R.G.S., more initials than the administration, and he isn't a Democrat.

- **Sol Polito, A.S.C.** is now doubling in brass . . . he is endeavoring to become a member of the 4th estate. Recently he doubled for Robbins Coons, feature writer of the Hollywood Citizen-News and while Robbins was on his vacation conducted his column for one day . . . of course he talked about photography.

- **Harry Fischbeck, A.S.C.** was proposed for mayor of Palm Springs, but Harry rushed back to the Paramount Studios and hid in his blimp until after election. The whole matter was seemingly provoked because Mrs. Fishbeck went for real estate owning at the Springs. Harry claims he can never be anything but a cinematographer . . . but can you imagine his cards reading, "Hizzoner, Harry Fishbeck".

- **Henry Sharp, A.S.C.** is directing photography at Paramount on "Lady Be Careful". Frank Dugas is his assistant. There is a form of sea-sickness prevalent on the set . . . due 'tis said to Dugas' pipe.

- **Chas. Lang, A.S.C.** is still sunburning the roof of his mouth and his tonsils looking at the tall buildings on his vacash in New York City. It's Charlie's first migration from Sunny California.

- **Elmer Dyer, A.S.C.** isn't sure whether he is going to Mexico or Arizona for exterior shots of "The Light Brigade". The studio rumor is Mexico, but Elmer's assistant said he heard from the man at the zoo who heard from the man who owns the horses that everybody is going to Arizona. So if you are doubtful about where you are going on location after this the best bet is to ask some horse on the lot . . . they'll know more about it than the producer himself.

Shooting Upwards from Fifty Below Zero

Continued from page 286

room" was erected. In it we could develop temperature as low as seventy degrees below zero.

Here we made elaborate tests. I may add that I, too, got a bit of testing in that room. Possibly of the most interest is the test we made to reveal the effect, if any, of extreme cold on the photographic qualities of film. Under identical conditions and on the same reel of negative, footage was exposed at seventy degrees below zero and then at regular steps up the temperature to normal room warmth. No appreciable difference could be observed over this wide temperature range.

In fact, from Alaska to Africa or Indo-China or Tahiti I have found that our current film is remarkably stable in regard to sensitiveness to light of the silver salts in the emulsion, over a wide range of working temperature and atmospheric conditions.

"Eskimo" was the first picture I had photographed without a field laboratory at hand for immediate negative development. As a result, I am firmly convinced to the the policy of on-the-ground processing when on extended far-off locations. It is far more satisfactory in all ways, and safer.

Our undeveloped negative was flown out of Alaska to Hollywood twice weekly. It all came through satisfactorily with the exception of one reel. That one apparently had become heated in transit, had sweated, and become chilled again. When opened at the studio laboratory, the negative was firmly stuck together and only by extremely careful treatment was it made usable.

Generally speaking, there are far more photographic possibilities resident in the tropics than in Arctic regions. You can find plenty to shoot. Shadows may be bothersome due to the atmosphere being so clear and lacking reflecting qualities. There is much variance in climatic conditions day to day and from one set-up to another. Only one factor is certain, the uncertainty of light values.

The secret of bringing back good pictures from lands of extreme temperature is, as in the studio, to plan your work, do it carefully and intelligently, and with great patience. You must be

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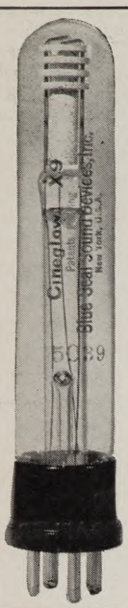

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willing and content to wait for suitable conditions. We waited six weeks in order to get one needed shot for "Eskimo." But it was right when we did get it.

My many years of nomadic camera work in distant corners of several continents—filming dramatic productions, mind you, not scenics—have not been without manifold compensation. I feel I have obtained more from my efforts than had I been engaged in routine studio duties. Certainly my experiences have been more unusual, life more full. There has been no monotony. Each morning has brought, not merely "another day," but its quotas of new problems. There has been little of the cut-and-dried nor the easily-anticipated. I have acquired a broad sense and appreciation of reality—which is good for the soul.

I believe these experiences make me a better studio cinematographer. Certainly I have fallen into no grooved formulistic way of working. I don't pattern my practice after prevailing accepted versions. Friendly critics give me credit for imparting a feeling of vigor and body to man-made scenes. I hope they are correct.

As you read this I will be at Santa Cruz filming "Ol' Hutch". It's the farthest I have been from Hollywood in six months. I'm afraid I'm beginning to take root in the place.

Lighting Requirements of the Three-Color Technicolor Process

Continued from page 283

show that the useful life of lamps conserved in this manner will be about the same as the present regular studio types.

All sizes of Mazda lamps used for studio service change their light output the same percentage for a given change in voltage, so that contrasts and balances between shadows and highlights, set up at a lower voltage, will be faithfully retained when the lamps are brought up to full voltage. The entire group of lamps recommended for Technicolor photography possess the same color quality of light, and furthermore, this color remains constant so long as the voltage does not change. This feature is of particular value in close-up work where relatively few lamps are used and the "averaging" effect of large numbers of sources is not present.

Incandescent lamps have been used exclusively for several years in making the popular animated cartoons in Technicolor, and have frequently been used for special effect shots and process work in current productions.

The many inherent advantages of incandescent lamps to the studios, which experience with black and white photography has so thoroughly demonstrated, demands their more extensive use in forthcoming Technicolor productions.

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David Abel Evolves New Technique

Continued from page 288

Camera is mounted on crane or ambulator as conditions dictate. As Astaire does his dance maneuvers, so does Abel rehearse his camera crew. So far as possible, the camera follows the star framing him head and foot. As rehearsals proceed, the crew learn the song music and take words from the lyrics as cues to the star's immediate destination. In this way, they can anticipate camera mobility.

The Operative Cinematographer, eye glued to view-finder, keeps the star in frame with thought for correct composition. The Assistant is alert for changing focus. Others man the crane or ambulator.

To make things more interesting, Astaire purposely concentrates on his work at hand and gives no thought to his position at any time in relation to the camera. As result, he seldom covers the exact route twice. Which forbids any precise advance calculations by the cinematographic staff.

When Astaire is satisfied as to the perfection of his effort, Abel is ready for the 'take.' Then, as he puts it, "When the camera starts, it's every man for himself." As an instance of co-ordinated team-work, it is a superb sight.

A madly whirling, dancing photographic target, with Abel lighting and lensing it with all the uniformity of a stationary subject! Even so, a minute slip in the timing of the camera's manipulation and all-important flying feet are cut off, or vital expressions go out of sharp focus.

It is a formidable undertaking. It calls for fathomless alertness, patience, perseverance. No tricks are used. What Astaire does on the screen, he does before Abel's camera—and Abel captures it.

For notable instance of camera agility and of close-up lighting of full figures operating over a wide area, you can well observe Abel's current contribution tentatively titled "Never Gonna Dance." It is truly amazing what flexibility can be imparted a camera under competent hands.

David Abel's long cinematographic career serves him well in these trying assignments. It has permitted him to contribute a new technique of photographing the dance. In so doing, he has still farther extended the ever-widening horizon of the camera's capabilities. The camera has met and conquered yet another form of creative expression that had origin on the stage.

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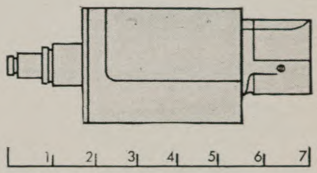

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ly dramatic compositions. His accomplishments in celluloiding the dance open vistas of still greater artistic and technical victories. His genius has permitted untold millions to enjoy in undiluted form the beauty of personalized rhythm. He gives to the screen that which was heretofore the sole property of the theatre.

Universal Studio to Emphasize Cinematography

Continued from page 287

these young players in a half-hour than we could in two months otherwise.

Close-ups were made things of beauty, and being beautiful the best camera angles of the players were italicized. The big "choker" type of head shots not only aided the young players to make good impressions but they also showed our studio folk how slight changes in hairdress, a bit of dental work here and a cosmetic change there, would enhance their value as purveyors of screen entertainment.

I am happy to note that progressive film critics in many important cities are now crediting the photography in pictures to the individual cinematographer because the sheer merit of the pictorial creations has demanded recognition to the man behind the camera as well as those in front of it.

Full public as well as professional recognition is bound to come to all these fine artists of the camera, and we sincerely and earnestly hope that at Universal in the next year we will be able to lead in the field of photography as well as in general entertainment value.

We have the necessary mechanics. We have the trained cinematographic talents. Mr. Koenig and I will provide every means for the fullest exercise of these assets in actual production.

Will Color Revolutionize Photography?

Continued from page 285

ures and 100 shorts, in addition to serving the English producers until the British Technicolor branch is in operation. Such volume, alone, cannot make a lasting color boom: but the intelligent way in which producers, directors and cinematographers alike are approaching the problem of color is the real augury of color's success. Once we have genuine entertainment in color, as distinct from the too often undistinguishable "pictures in color" of the past, color will find itself permanently entrenched in both studio and box office.

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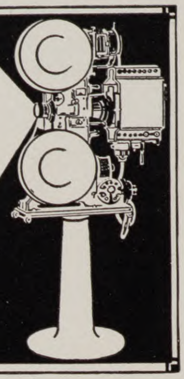

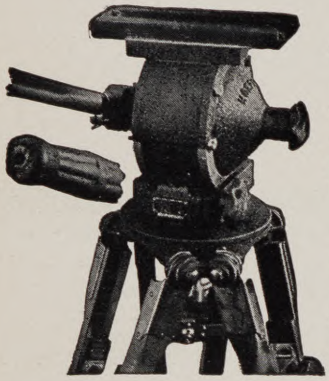

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AMATEUR MOVIES

JULY,
1936

this issue

How to Find Lens Field
What to Shoot at the Centennial
Notes on Nautical Filming
Do Your Cutting in the Camera
What to Shoot in Color
. . . and other features

25c

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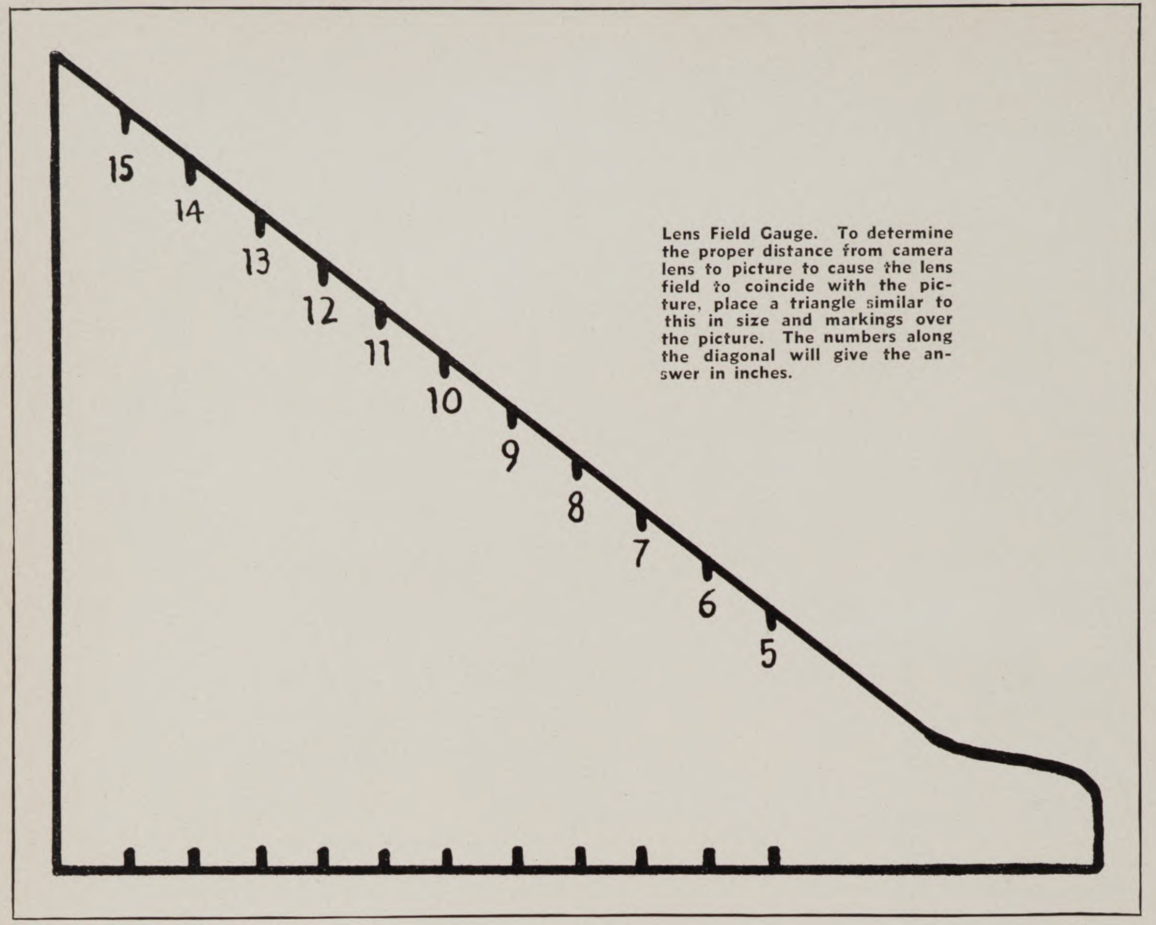

Lens Field Gauge. To determine the proper distance from camera lens to picture to cause the lens field to coincide with the picture, place a triangle similar to this in size and markings over the picture. The numbers along the diagonal will give the answer in inches.

How to Find Lens Field for Inserts

by
B. S. Mothershead

WITH FEW EXCEPTIONS, every amateur cinematographer has been more or less interested in still photography before he took up the kinetic art. And the chances are that he has quite a collection of "snap shots", which he values for their artistic quality, or perhaps for the drama or comedy captured, or at least because they bring back pleasant memories of events and folk.

But with the acquisition of his cine-camera and projector, the still photos are pushed to the back of his bureau drawer and almost out of his memory. And so all of the good and pleasant qualities of those photos are lost to sight. It need not be so. It is quite practical and the results may be highly gratifying when the best of these still photographs are blended into the reels of moving images.

There are many ways in which this blending can be done without sacrifice of the artistic effect or lack of continuity. Perhaps the most obvious application is the preparation of a special reel with the primary purpose of presenting these photos. A photo album is the center of interest, and the action revolves around it.

Perhaps it will be the mother pointing out to little Johnny how daddy looked before he married her. Or it may be daddy taking the young son through a series of adventures partly remembered and partly imagined, but inspired by those photos of the hunting or fishing trip. Perhaps a group of old friends may be brought together and turned loose on a lot of photos in which they have a common interest. If the cameraman is alert he is sure to catch a wide variety of emotions as the pages of the album are turned.

Some such idea will furnish the continuity or moving background for your still photographs. The reel should open with enough action to clearly present the idea and prepare the cinema viewer for the reception of a still photo on the screen. Then a section of film showing the still is cut in. A little action film follows to show the reaction of the person looking at the album. Then another still, and so on. Avoid monotony that will result from either too much switching back and forth from action to stills, or from too many stills in sequence without a little action to maintain the continuity. Also avoid holding a single still on the screen too long. Five to eight seconds is long enough unless there is some particular reason for holding it longer. Also avoid the use of stills that portray arrested motion unless you want a comedy effect.

The matter of transfering your still photos to the film to be spliced into your reel is not difficult, if you have had any experience in making your own titles. Of course, if you cannot be bothered with that sort of thing, just send the selected photos to some good titling studio, and they will be returned with the film reproduction ready to be spliced into your reel.

If you wish to do your own reproducing, refer to articles heretofore published on titling methods, and follow the suggestions there for centering, exposure, et cetera. There are two points on which special suggestions should be made here, growing out of the fact that you must take the photos as they come with regard to size, while you can control the size of your title copy.

The first point is in adjusting the distance of the camera from the picture so as to have the full field of the camera filled by the picture or such part of it as is desired. I have found the quickest and most satisfactory way is in the use of a piece of cardboard cut to the approximate shape of a triangle with graduations marked on it so that it may be placed over the picture to be reproduced and a direct reading taken of the required distance. A diagram of such a triangle prepared for use with my camera is presented on this page. A similar triangle can be made for any other camera, by taking a few test shots of this triangle with the other camera, and increasing or decreasing the spaces between the graduations marked.

To use the triangle, place the right hand corner at the lower right corner of the picture. Align the lower edge of the triangle with the lower edge of the picture. The upper left corner of the picture or its top or left edge will cross the diagonal edge of the triangle. The mark on the triangle at the point of such coincidence will indicate the proper distance from the lens to the picture in inches.

The matter of accurate focusing is the other point that must be considered. At the short range necessary to fill the camera field with an average snapshot the focusing is very critical. In other words there is very little depth of field. Furthermore, very few cameras are so equipped with standard lens that they may be focused for distances under two feet.

For these short focuses, the most available method is in the use of auxiliary lenses. This procedure is very simple when the principle of these lenses is understood. Quite satisfactory lenses for this purpose are available in the lenses from reading glasses or spectacles, which may be secured at very little cost. These lenses may be held before the camera lens with a filter holder taking a 1½ inch filter. Or they may simply be held before the camera lens by hand, if care is taken to keep them parallel with the camera lens. When used with a focusing camera the regular lens should be set at infinity, except as explained below.

These lenses are usually marked with a small sticker bearing two numbers one over the other. For example, the top number may be +2.50 and the bottom number 16. The top number is the diopter of the lens and the bottom is the focal length in inches. In using a lens bearing the particular numbers given above it should be held so that the auxiliary lens is as close to the camera lens as is practicable and so that it is between 15 and 17 inches from the picture to be reproduced.

These lenses may be secured readily in the following focal lengths expressed in inches: 8, 9, 10, 11, 12, 13, 14, 16, 18, 20, 22, 26, 32, 40, 52, 80 and 144. The range of sharpness for each of these lenses overlaps slightly that of the nearest lens on either side. The diopter of the lens is found by dividing the number 40 by the focal length, or the focal length may be found by dividing 40 by the diopter. This principle is useful when it is desired to combine two or more lenses to get a shorter focal length.

To determine the focal length of a lens combination the diopters of the two or more lenses making up the combination are added together and the sum divided into the number 40. By use of this lens combination method and with a pair of lenses for each of focal lengths 144, 52 and 16 inches, a combination with any desired focal length can be secured. The only limitation on the number of lenses which may be so combined is the mechanical problem of holding them centered before and parallel with the camera lens. It is obvious that these lenses must be shielded from any strong direct light such as the sun or an electric light used for lighting the subject.

Where a focusing camera lens is used the various focal lengths can be secured by combining the auxiliary lenses and the camera-lens settings as given by the accompanying table.

TABLE OF COMBINATION FOCUSES USING
AUXILIARY LENSES WITH A FOCUSING CAMERA

CAMERA LENS SETTING	FOCAL LENGTH OF AUXILIARY LENSES							
	26″	20″	16″	13″	10″	8″	20″+10″	20″+8″
INF.	26″	20″	16″	13″	10″	8″	6⅝″	5¾″
15′	23″	18″	15″	12″	9½″	7¾″	6½″	5⅝″
10′	22″	17″	14″	11½″	9¼″	7½″	6⅜″	5½″
8′	20½″	16½″	13½″	11¼″	9″	7⅜″	6¼″	5⅜″
6′	19″	15½″	13″	11″	8¾″	7 3/16″	6⅛″	5¼″
5′	18″	15″	12½″	10¾″	8½″	7″	6″	5 3/16″
4′	17″	14″	12″	10¼″	8¼″	6⅞″	5⅞″	5 1/16″
3′ 6″	16″	13½″	11½″	10″	8″	6¾″	5¾″	5″
3′	15″	13″	11″	9½″	7¾″	6½″	5⅝″	4 15/16″
2′ 8″	14½″	12½″	10½″	9¼″	7½″	6⅜″	5½″	4⅞″
2′ 4″	13½″	11½″	10″	9″	7¼″	6¼″	5⅜″	4¾″
2′	12½″	11″	9½″	8½″	7″	6″	5¼″	4⅝″

What to Shoot at Texas Centennial

by
Wm. J. Grace

IF YOU'VE been listening to your radio or reading almost any of the national magazines, you've probably come to the conclusion that something is going on down here in Texas this year of our Lord 1936. Those in charge of Centennial publicity have been about as busy telling the world about the Texas Centennial as the 1933 Chicago World's Fair had written about it.

Because we're the sort of people down here who don't believe in wasting too much effort shouting our advantages and achievements (this is too close to the "Land of Manana" to get too worked up about anything), we haven't impressed the nation very much with anything but our size.

Yet size alone isn't the only thing Texas has to commend it—in fact, that's the least of our proud possessions. What the residents of Texas are most proud of is the history and romance of a commonwealth, a State, and the only State, which was a Nation in name and fact before it became part of our great United States. The land that is Texas has been under more different flags than almost any other territory in the world—Spain, France, Mexico, Texas, Confederate, and United States. Cabeze de Vaca is supposed to have landed on Texas' shores in the year 1519, quite a few years ago; not long after Columbus' discovery of the Continent.

What Texas is celebrating this year is the one hundredth anniversary of its freedom, not its total age. And it is the color of 400 years of human endeavor that makes the background for these last hundred years of settlement and progress.

When one tours thru the Atlantic and films historic spots of "the place where the Pilgrims landed", "where the Civil War was started", "here lies John Brown's body, a molderin' in the grave", one is proud of having captured a movie record of our Nation's early days. But until this year, I'm afraid, we've been overlooking a lot of bets in the historical interest line when we slight the romance of Texas history.

This Summer thousands of visitors will come to Texas to see what we're shouting about down here. More than a few will be surprised, I feel sure, to find that we don't wear cowboy regalia and a pair of sixguns, but you won't be here long until you begin to feel that under our standard modern garb we have retained our old-time long range vision and willingness to pioneer things. The subtle undercurrent of power to progress is by no means entirely masked by our seeming languid locomotion. When we move it's to get somewhere.

If you are fortunate enough to capture this spirit of Texas on your film footage, you've done a thing which lifts your news-reel record out of the commonplace—and I know it can be done, for I've seen movies which prove it without a doubt.

When you come to Texas this Summer, be sure to be all set to cover the whole State. Dallas is having a unique Central Exposition on the site of her regular permanent State Fair Grounds, and impartial visitors have said that while the Texas Centennial Central Exposition at Dallas isn't as large as the Chicago Fair, it is just as impressive and in some ways more beautiful. You see, at least half of the buildings are permanent structures, not just good for this year's Fair.

At Dallas you'll find a collection of buildings modern in design as were those at Chicago, but modified somewhat and lighted differently. The method of lighting the streets is unique with its modern half-shells lighted by concealed floodlights and neon strips, colored fountains, and lighted building walls. There is no direct illumination at all on the grounds—everything is lighted either thru translucent glass panels or by glowing walls lit by concealed rows of lamps. There isn't a great deal of neon lighting, neon being used chiefly for occasional bordering.

Frankly, I haven't tried to film any of the Dallas Exposition at night with Kodachrome, but I am informed by the local Eastman representatives that full exposure can be made with a camera which can be hand-cranked at 2 frames per second. Not that I doubt this man's word, but I believe I can get night shots with sufficient exposure at 8 frames, and I intend to try some of it. Another scheme which could be effectively used is to take movies about 7:45 or 8:00 P.M., when there is a little natural sky light to help out the artificial illumination and give the buildings form. But in the daytime, Texas sun will light the buildings brightly enough so that at 16 frames Kodachrome will require f/5.6 to 6.3 in the sun and around f/4.5 in the shade (not indoors, however). If you don't plan to use Kodachrome, by all means use panchromatic, for I don't believe you'll be satisfied with the way the myriad of colors will turn out with any other black-and-white film. You can do that with either 16 or 8 now, you know.

But don't let the Dallas show be the only thing that brings you to Texas for movie making. San Antonio has four old missions in various states of ruin, and one cathedral down town which is, of course, in good repair, for it's used for services today. You can climb all over the missions and get any number of angles. And the most famous of all the Texas missions, the Alamo, is right in the heart of town. The Alamo, in case you haven't heard, was

Continued on page 312

If Story Is Not the Thing What Is?

by
Max Liszt

ONCE UPON A TIME a man in the East exclaimed: "The play is the thing!" And the men in the West, those who make pictures, bowed their heads reverently and chorused in unison: "A-men!"

And ever since have they chased the rainbow with the pot of gold (the play). And ever since have they cried for stories, to make into pictures that would roll in the dollars at the box offices. And ever since have they put the men of the East, those who write and produce plays, on a high pedestal, for was it not one of them that spoke such wise words of the play being the thing? And ever since have they raided New York for plays (stories) and made them into pictures that, nine times out of ten, stayed below expectations or chalked up a loss. And ever since have they pried into the nooks and corners of the world for stories.

Yawsuh! Good stories, because the story is . . . . etc.

Naturally, seeing these good men busily prying for good stories, one is inclined to believe that they know what constitutes a good story. Until one asks.

Then the busy men will look up and sum up a list of New York plays that made money at the stage box office, and pronounce these plays good plays—good stories. But they forget to mention that these selfsame plays when poured in film-form many times flopped miserably or stayed below the mark: money-maker.

And when this is called to their attention they shrug their shoulders, mumble something about sticks and hicks, but insist that they were good stories.

One is insistent and demands to know what the ingredients are of a good story. Then the busy men will gulp, stare at one another for a moment, next act as if they did not hear the question, and then busy themselves again searching for stories, good stories. Yawsah!

In their anxiety, and to cover up, they will resurrect old plays, old stories that were once made into pictures that earned good money, pronounce these, therefor, to be good stories and suggest that the studio re-make them. Because these, the men will argue illogically, are good stories made into box office pictures once before, and therefore they will make money again.

The studio makes this "good story" into a picture again, only to find out, most of the time, that it flops miserably at the box office.

In desperation the studio calls the men on the carpet to learn "what's up?" only to find out that that great game "passing-the-buck" counts many expert players. And so the merry-go-round goes round-and-round and gets nowhere.

What is a good story? What is a bad story?

There are no good stories. There are no bad stories.

Every story is good! Every story is bad!

The story is not the thing, its presentation is the thing. And this presentation is what makes the box office behave good, bad or indifferent.

In motion pictures we are telling a story in filmic motion, and the way this filmic motion is employed determines the picture's (story's) success. It is the same as with a joke. One man will tell a joke and the audience will be bored. Another man will tell the same joke, using exactly the same words, and it is a phenomenal success, his "presentation" of the joke's material makes it a good joke, while the "presentation" of the previous man made the joke a bad one. Still it is the same joke, consequently: the joke is good, the joke is bad.

The same with stories: every story is a good story or a bad story depending entirely upon its presentation in filmic form.

Let us look at the following "story" and try to classify it.

"An angry man leaves his room, closes the door behind him, walks down the stairs, steps into his car and drives away." Is this a story? Most certainly. It tells something and therefore is a story. Its manner of presentation (telling) in the filmic medium will determine its status.

If we have a conventional longshot of the whole thing its status will be "bad" because it does not convey to the audience anything but the physical movements of the man and disregards entirely the mental side of the story. But if we would break this up into several scenes from various (story-determined) angles, emphasizing the mental state (anger) of the man in addition to his physical movements the story is "good" because now the audience will be able to sense the menace of this man and be kept interested.

In these two presentations we have demonstrated that the story is depending upon its presentation to be good or bad, but the story in itself is neither good nor bad and therefore: the story is not the thing, but its filmic presentation is the thing.

The reason why successful stage plays so often flop in their filmic presentation is due chifly to the great difference between these two mediums of expression: stage and screen. On the stage the medium of expression is dialogue; but the film's medium of expression is primarily by visualisation and secondarily by speech. The mistake is committed by not taking this in consideration, in other words by trying to conform the filmic presentation to the stage presentation thereby resulting in the picture being presented in a manner prostituting the laws of filmic expression, and henceforth it flops.

In order to be able to present a story properly in its filmic form one must know intimately all the laws of filmic presentation, what they stand for and what they are able to do and how they reach their ultimate goal. And above all one must be able to oversee and visualize them as a complete structure because all filmic laws are so intricately dependent on one another that no one is self-supporting so that it is impossible to give one's attention to one law and disregard the others. On the other hand it is absolutely necessary that not one filmic law be overlooked or carelessly applied because one flaw in the filmic structure of the motion-picture presentation of a story is able to make the structure collapse, in other words make the box-office receipts stay on a low level.

In Hollywood, where the production of pictures is a hit or miss process the one who (mostly by accident) delivers a successful picture is kow-towed to by all the stu-

Continued on page 315

CARL
A.
STAHL

Notes on Nautical Filming

by
Carl A. Stahl
Chief Photographer, U.S.N.

"ART IS NOT WHAT—but how!" Thus says Daniel B. Clark, A.S.C., one of Hollywood's best-known cameramen. Some time ago I had the privilege to meet Mr. Clark at the headquarters of the American Society of Cinematographers, where I had a very interesting chat with him about things photographic. To make every picture taken a work of art is the constant aim of Mr. Clark and every one of his brother-members of the A. S. C.

Fundamental principles of art play a large role in the achievement of outstanding results with the camera. If we think of photography as an art, these two words are really interchangeable in Mr. Clark's sentence that starts this article. Remember always that the excellence of the pictures we produce depends not so much on what pictures we make as it does on how we make them.

Do you want to take a series of the best lessons in photography I know of to study composition, balance, lighting, key, harmony and other details that go to make a good picture? You have this opportunity and it will cost you but a trifle. How? you ask,—and when and where? You can start right now. The "course" will be entertaining as well as instructive. It simply consists of studying the superb photography of the Master Craftsman of the Camera to be seen on the screens of every motion picture theatre in the nation.

Basically, the rules of good photography are the same in every feature production Hollywood turns out, be it drama, Western, costume, musical or any other type of film. When we sea-going photographers have opportunity to see such a classic of the silver screen as "Shipmates Forever," we realize how artistically nautical scenes can really be photographed. But bear in mind that Sol Polito, A.S.C., who filmed this masterpiece, uses the same technique he employed in "Shipmates Forever" in every picture he has photographed. The only difference is that his artistry was perhaps more apparent to us in this film because the scenes photographed were so much more familiar.

So, from now on, when you go to the movies don't only follow the action portrayed; study the photography as well. And one thing I'd suggest in particular. It is: Watch the shadows. They often tell you more than the highlights will about what makes some scenes appear so striking. If you have the sun shining over one shoulder towards the subject when you start filming, you should get a clear photographic record. But you usually want much more than this—you want an artistic record.

One detail of great importance in taking close-up photographs of individuals often overlooked is the angle from which the picture is taken. When taking close-ups of individuals be sure the camera is not too low if you are using a tripod. To have the camera at about waist level when your film would be what is termed making an "angle shot" in the parlance of the professional. "Angle shots" are quite striking at times, and newsreel cameramen resort to them often to graphically picture certain types of scenes, e.g., inspection and reviews. But when a close-up of an individual is photographed from the waist level instead of the eye level the result is apt to be disappointing. You can see why this is by standing close to anyone, looking them in the face, and then, with your eye always on the subject's face, lowering your head to about where your waist line normally is. Apropos to this type of picture, better results are as a rule obtained by not photographing the shoulders "bows on." Have them on an angle, regardless of the position of the head.

A subject that makes a very pleasing picture is a seascape in silhouette. Very few amateurs apparently attempt this. Perhaps the reason is that the method of making silhouettes seems quite unorthodox to them. It is done by pointing the camera in the general direction where the sun is, instead of away from it. Only, don't get the direct rays of the sun into the lens. The sun should either be obscured by clouds, or out of range of the field the lens covers, or some individual or object should hide the direct rays of light.

Another point often overlooked is the importance of fore- as well as background in many pictures, especially in scenes taken on the beach. I recall an incident in Honolulu. The Saratoga, Lexington and Ranger were all riding to anchor off Waikiki Beach. The lighting was not particularly good. But, as often happens, that detail could not be changed except to come back at another time of day. A number of civilians were taking pictures of these three ships from the sea wall. Taken from that point of view they would only get "long shots," devoid of foreground detail. By going a few hundred yards more they could have photographed the same ships through a grove of trees and secured splendid composition by having branches, etc., in the foreground.

Be your subject Shanghai, Bubbling Well Road, the

Continued on page 312

Do Your Cutting Right in the Camera

by
Walter Blanchard

GUS, MY CINEFILMING NEIGHBOR, was in a dither. The big worry was his vacation filming: how could he compress all the summer films he'd planned into the footage his pocketbook allowed—and still get complete pictures?

After we'd discussed the matter pro and con through one of Mrs. Gus' best dinners, it took only a hint to persuade Augustus to put his last season's epic through the projector. While our campaign managers in the living room compared notes on hotels, diets and the price of eggs, we compared the celluloid records of Gus' trips to Hawaii and to the Oregon trout streams with reality and the home-movie ideal. On both counts, the films took an awful beating.

Going to Hawaii, Gus' fondest memories are of lazy, sun-splashed shipboard days; of smiling, nut-brown natives initiating one into the mysteries of poi; of the hula; of Waikiki's surf and surfboard-riders; of uncounted acres of tufty pineapples under cloud-decked skies; of spidery palms silhouetted against a silver sunset sea.

His films somehow managed to miss most of this. On the screen we saw mainly chance-met Rotarians and school teachers, afloat and ashore; sprawly, sand-strewn bathers who might, for all we knew, have been idling at Crystal Lake at home; underexposed shots of Honolulu's busy streets—and a few very random shots of Hawaiians near the hotel.

As for the fishing trip, Gus remembers most clearly one darting, leaping steelhead that fought free of his hook; the almost-as-scrappy one that didn't get away; the feathery whiteness of Mill Creek falls; a mountain snowstorm on the Fourth of July; and of Doc Peters' surprising skill at flipping flapjacks.

But his camera didn't catch any of them. He has a lot of shots of his Waltonian friends "cutting up" at camps and gas stations, and a few scenic shots made when the fish weren't biting—and the light was a few points off, too. Fish? Well, there's an end-of-the-roll flash of Doc Peters holding up a fair sized rainbow trout and another flash (underexposed) of the gang eating something that could be either fish or sausage. Of course, as Gus explains, during the snowstorm there was a swell poker game in Harry's tent, and when they went to Mill Creek they had to scramble down a four hundred foot canyon so steep that a camera, added to the necessary fishing tackle, would have been too much of a load. And when the fish were biting—well, everyone was just too busy fishing to think of pictures!

Just the same, when my friends promise me a movie of Hawaii, I want to see something of Hawaii, and when they promise a reel made on a fishing trip, I'd rather like to see something that tells me how successfully they fished. I've never yet seen a convincing alibi on a home-movie screen—and it must be a lot of work to run a projector and apologize at every scene.

So my advice to Gus was to keep his finger off the camera trigger when he wanted to photograph a scene that would need alibiing, and not to shoot any scene that might require an apology. Cutting out these shots before they are made will leave lots of footage for the scenes that really tell your vacation story.

Having saved 90% of his vacation film allowance right there, Gus' next problem was what to do with it. It's all right to say, "use it to film the things you'd remember"—but it isn't so easy to shoot a memory before you have it to remember!

While the ladies raided the Frigidaire and made sandwiches, we tried to analyze our favorite vacation memories. Most vacations can be described by answering one of two one-word questions: "where?" and "what?" In other words, where did you go? or, what did you do? Nine times out of ten, you can tell which kind of vacation yours will be as soon as you've made up your mind how you're going to spend the time.

If you know that much, you can pretty well determine what your camera ought to look at during the trip.

Suppose it's a "where" vacation. Right away you know that your picture needn't concern itself with people except as they are definitely a part of the "where" of your trip. A shot or two of yourself and the wife, perhaps, as evidence of the fact that you visited Honolulu or Ketchikan or the Yellowstone—but wandering Elks, Shriners, or your wife's bridge partners can be ignored, as they are the same everywhere. On the other hand, close-ups of natives munching poi or riding surfboards, or doing the rain-dance at Taos, are definitely a part of the "where" memories. So, too, are Zuni squaws weaving blankets or baskets, Navajo braves hammering silver bracelets, or even the bearded Sikh policeman directing traffic on the Shanghai Bund. Get them, by all means, together with the pictorial shots of Diamond Head, Old Faithful, and Going-to-the-Sun Lake. They're all part of the "where!"

Contrariwise, if your friends are going to ask you what you did while you were away, let the cinebox tell them. Show the crowd you went with getting ready to go; assembling rods, flies, guns and lures. Show them in characteristic bits of action en route. When you get there, use the camera to show how you lived—Joe trying to shave his bristly beard with cold spring water (and the hairy horror he became before he got back to civilization!)—Doc Peters doing triple-turns with a flapjack—Sam's struggles with a pup-tent. Next, let the camera see the gang actually doing what they came there to do: fishing, hunting, golfing or what have you. And show it thoroughly; maybe it won't be possible to follow one complete session of angling through from selecting the fly to landing the fish—but if you photograph the same man in the same place (or a similar one) going through the various stages, the result on the screen will be the same, even though the various scenes might have been made at different times, and with different fish. By all means show the result, too. Say it's fish: show not only the big beauties the boys boast about, but also the lesser fry. There's always comedy in a disappointed angler measuring a fish that's just a fraction of an inch too small, and reluctantly throwing it back!

Continued on page 316

Selections In Color

by
Wallace Black

THERE'S an enormous difference between merely being able to do a thing, and knowing when to do it. Max Schmeling, for instance, could undoubtedly wallop Joe Louis' profile quite as effectively on a street corner as in a canvas-floored ring—but doing it in one place would simply get him arrested, while in the other, the same action will get him a very sizeable percentage of a million dollars.

It may be far-fetched to compare natural-color cinefilming with the manly art of assault and battery, but they have this in common: each can be good or bad according to when and where they are practiced. Technically, it is possible to put a roll of Kodachrome into any substandard camera and photograph anything and everything in full color. Actually, misused color scenes can show as much bad judgment as fisticuffs in church.

A year ago, when Kodachrome appeared (and seven years ago, when Kodacolor made its bow), the first impulse you and I and everybody else had was to make a beeline for the nearest garden and expose hundreds of feet of useful film close-upping the posies. So what? We proved that the film would give us a very pleasing reproduction of the shape and color of the flowers. And we learned almost as quickly that our most gorgeous colorfilming efforts were of no particular interest to audiences.

At that point, nine out of ten of us started jumping to conclusions. Our finest color photography failed to interest audiences—the same audiences, perhaps, who liked our black-and-white. Ergo, color movies did not interest audiences. And nine out of ten of us went cheerfully back to black-and-white.

And here and there the tenth cinefilmer reasoned differently. The color might be good, but was the film interesting as a picture?

Looking at things this way, it isn't hard to see why so many home colorfilms landed on the shelf. All the thought had been devoted to making the color itself good, and little or none was left to give intelligence to what the picture was to say. Inevitably, audiences paid them the usual tribute accorded "dumb Doras": a moment's applause for their beauty, followed by huge quantities of indifference to their inarticulate maunderings.

Once the situation has been reasoned out this far, only one conclusion can be reached: that a color picture, if made with the same attention to audience-appeal that would be exercised making the same film in black-and-white, ought to prove more interesting because of the addition of color. Provided, always, that the color does not of itself divert the audience's attention from whatever the picture was trying to tell.

Until the time comes when we can all shoot color exclusively, and the film manufacturers stop making black-and-white film, the best way to insure that color won't be fighting audience-appeal is to select for our color-films subjects which are definitely helped by color. To be filmically worthwhile, color must be a genuine part of the scene—not merely an embellishment. In general, if your picture concerns itself primarily with a place or thing shown, color is a pretty safe bet. On the other hand, when the picture deals primarily with something done, black-and-white is usually as good or better.

One of the most discerning of filmsters in this connection is that perennial competitor in the American Cinematographer's Contests, H. W. Voss, of Florida and points west. Mr. Voss' favorite shooting-ground is the "Wild West" of Yellowstone Park, the Jackson Hole country and the Grand Tetons. Time and again, as Contest-time drew near, the Editors would learn that that gentleman was submitting two entries, the product of his summer's filming. One reel would be in black-and-white; the other in color. Each one would deal with a different type of subject. Each subject would prove ideally suited to the medium chosen for its presentation.

The black-and-white entry usually dealt with some phase of the activities of the old West. Cattle-ranching—horse-raising—rodeos: every one an action-story.

The color entry would deal with the country itself. "Wonderful Wyoming"—"The Rivers and Geysers of the Yellowstone": subjects in which color itself told half the story.

In the monochrome productions, action was the keynote. At a real rodeo, the display of color is interesting, but only incidental to the action we've paid to see. We may remark, "That's a beautiful bay horse", or, "That fellow in the purple shirt certainly can ride"; but a minute later, the rider rockets through the dust, and we've quite forgotten whether his shirt is purple or black. On the screen, we're interested in whether horse or man is going to win the battle: what they do—not how they look.

In Voss' color films, colorful scenic beauty was the story

Continued on page 314

All of the Family is in This Scenario

by
Barry Staley

PICTURES in good continuity based on incidents in family life serve a double purpose. You have a human-interest item of entertainment for any audience and, more, have a documentary film on direct concern to your own household. Here is a story in scenario form, easy to shoot and with your immediate family or friends as the subjects of your photography.

The dissolves lift the film from the elementary amateur production as do the impressionistic scenes incorporated between them. Sooner or later, every advanced amateur filmer has ambitions of making a symbolistic reel depicting the inner meaning of real events in subjective form. This one reveals the private thoughts of the listeners to a piano solo and is purposely in a light vein. Try it on your camera:

MAIN TITLE: MUSIC HATH CHARMS.

SCENE 1: CLOSE-UP of the keyboard of your piano from a high camera angle, the keyboard extending diagonally across the screen.

SCENE 2: MEDIUM SHOT from a similar camera angle of the piano. Mother leads Daughter by the hand to the piano bench.

SCENE 3: MEDIUM SHOT from a low set-up. Daughter is guided by Mother to a sitting position on the bench, her hands rise to the keys. Mother turns her head away from the piano and speaks a few words to those in the room.

SCENE 4: LONG SHOT from Mother's point of view of the room's occupants. Seated informally on chairs and davenport are Uncle, Aunt, Sister, Brother and Father. On the floor sits the family dog. A typical domestic living-room scene. All are looking toward the piano. Mother enters from camera and takes chair at extreme left. They gaze expectantly at the piano.

SCENE 5: LONG SHOT from guests' point of view of Daughter at the piano. She adjusts the position of the piano bench and fingers a music sheet.

SCENE 6: MEDIUM SHOT of Daughter as she strikes the opening notes of her concerto.

SCENE 7: CLOSE SHOT. Daughter's hands as they finger the keys.

SCENE 8: LONG SHOT from the piano of the guests, listening.

SCENE 9: MEDIUM SHOT of the guests in rapt attention, PANNING from right to left, and holding the shot on Mother's happy face.

SCENE 10: CLOSE-UP. Mother's face beaming proudly at Daughter's accomplishments. DISSOLVE TO—

SCENE 11: CLOSE-UP. Mother in different dress, looking proudly down.

SCENES 12 TO 15: Cut in some old scenes of Daughter, first as a tiny baby and at successive stages of growth.

SCENE 16: CLOSE-UP of Mother's face. (Continuation of Scene 11.) DISSOLVE TO—

SCENE 17: CLOSE-UP of Mother. (Continuation of Scene 10.)

SCENE 18: CLOSE-UP of Uncle. Possibly he may hide a faint yawn behind cupped fingers and his eyes droop slightly. DISSOLVE TO—

SCENE 19: LONG SHOT, full figure, of Uncle in comfortable sports clothes driving from the tee of his golf club. He wallops the ball mightily and proceeds down the fairway, away from the camera.

SCENE 20: LONG SHOT. A pictorial stretch of the fairway. Uncle strides in from camera and down the fairway towards the green.

SCENE 21: MEDIUM SHOT. On green. Cup is prominent in composition. Golf ball bounces in from camera, rolls along green, drops in the cup.

SCENE 22: LONG SHOT. Same angle as Scene 21.

Continued on page 314

WHEELS OF INDUSTRY

In Error

● Fotoshop, Inc., find that an erroneous statement appeared in their display advertisement in the June, 1936, edition of American Cinematographer. The price of Fotoshop Rapid Panchromatic 16mm Film in 10-foot rolls was given as $3.75 per roll, two rolls for $5.50. The price per single roll is correct but the price for two rolls on one order is $7.00—not $5.50 as stated.

16mm Catalog

● Bell & Howell Company announces a new edition of its catalog of Sources of 16mm Films on Geography, Travel, and Natural Resources. The purpose of the catalog is to indicate as completely as possible the films available in this field and where they may be obtained by free loan, purchase, or rental.

Especially noteworthy is the large number of sound films listed—87 in all. Among them are several of feature length, such "Thunder Over Mexico", "Isle of Peril" (life on the Faroe Islands), "Matto Grosso" (River of Doubt Country in South America), "N'Mango" (British Cameroons), "Trekking to Timbuctoo", and "This is America".

Also listed are timely sound film shorts, such as "Ethiopia" and "The Winter Olympic Games in Germany", several sound films on travel in Germany, three on coal mining, as well as a number on tractors and oil.

The National Park Service now has a full dozen films on National Parks, CCC and ECW work.

Among new silent films is a fine listing of hunting and fishing subjects available through Field & Stream magazine and the South Bend Bait Company. There are, too, films available on the construction of Boulder Dam.

A Kodachrome silent film on Bermuda is listed as available from the Cunard White Star Limited.

The catalog may be obtained from Films Division, Bell & Howell Company, 1801 Larchmont Avenue, Chicago, by sending 25 cents in stamps to help defray the cost of preparation and mailing.

SOS Catalog

● A ninety-page catalog of Cinema Equipment and Supplies for Theatre and Allied Fields has been issued by Sales-On-Sound Corporation, New York City. This catalog brings practically every conceivable type of sound equipment, supplies and accessories for any part of any theatre.

The preface lists such classifications as: Amplifiers, Sound-heads, Projectors, Sound Systems, Portables, Lamphouses, 16mm Equipment, Booth Equipment, Public Address, Studio and Laboratory Equipment, Sound Screens, Lenses and Reflectors, Opera Chairs, Supplies for Stage and Auditorium, Current Supply Devices, and Air Conditioning. A considerable number of these items are manufactured products of S.O.S., offered direct to theatres at decided economies.

Kodachrome Titles

● Bell & Howell Company announces Titlecraft color titles for Kodachrome film in both 16mm and 8mm.

These color titles are said to be brilliant, clear, and readable, and are available in four different tones: Blue, with purple and pink overtones, pale pink letters; dark green, with gold overtones, pale gold letters; brown, with orange overtones, yellow letters; brown, with green overtones, pale green letters. Color tones may be ordered to fit the character and mood of the sequence into which the titles are to be spliced.

The lettering may be had in standard type or junior letter styles on any background shown in the Titlecraft sample book, copies of which are available at Bell & Howell dealers.

Tripod Screen

● This model is now available in three sizes, 30x40", 36x48" and 42x56". It is said to be durable, compact, conveniently portable, beautifully finished, rigid in use and simple in operation. It can be raised to a height of 7½ feet from the floor. Operation is simple and accomplished after an improved manner. There are no thumb-screws to manipulate—as all adjustments are readily effected by means of spring release catches enabling one to set the screen at a desired height with instantaneous ease. Its various features include solid steel legs, doubly reenforced bronzed machined bushings which holds the legs firmly in place and brackets extending from the spring tube which support the screen. The tube is pivoted onto the tripod in a manner that will enable it to withstand consistent usage. Legs and roller tube are finished in black crackle, the tripod tube is nickel plated, the cloth beaded in conformity with the quality of other Britelie-Truvision Screens. A solid leather handle attached to the tube facilitates ease in carrying.

8mm Slitter

● J. C. Haile & Sons of Cincinnati announce a slitter for 8mm film. This is sold to assist those who use the double 8mm for titles and do their own processing. In addition to this this company also markets an 8mm film of the positive type for reversing. It is sold with or without processing privileges and in either 25 foot or 100 foot lengths.

Movie University

● A traveling university, the largest educational institution in the world, with an enrolled student body of more than 20 million, is predicted within the next few years, by George J. Zehrung, Director of the Motion Picture Bureau of the Y.M.C.A. Courses, taught entirely or supplemented by educational films, will go regularly, at a very nominal expense to groups of students, no matter whether they live in one of the great cities, or the wildest mountain ridge or the western plains. It is conceivable that every course now given at any university, from archaeology to medicine, can be included in the new university's curriculum, Mr. Zehrung declares.

Filter Holder

● Harrison & Harrison announce an improvement in the adapter for their filter holder which links this accessory to the tripod and camera. The new unit permits changing the angle of the holder at any time. The rod and holder are never rigid under the new plan of fastening.

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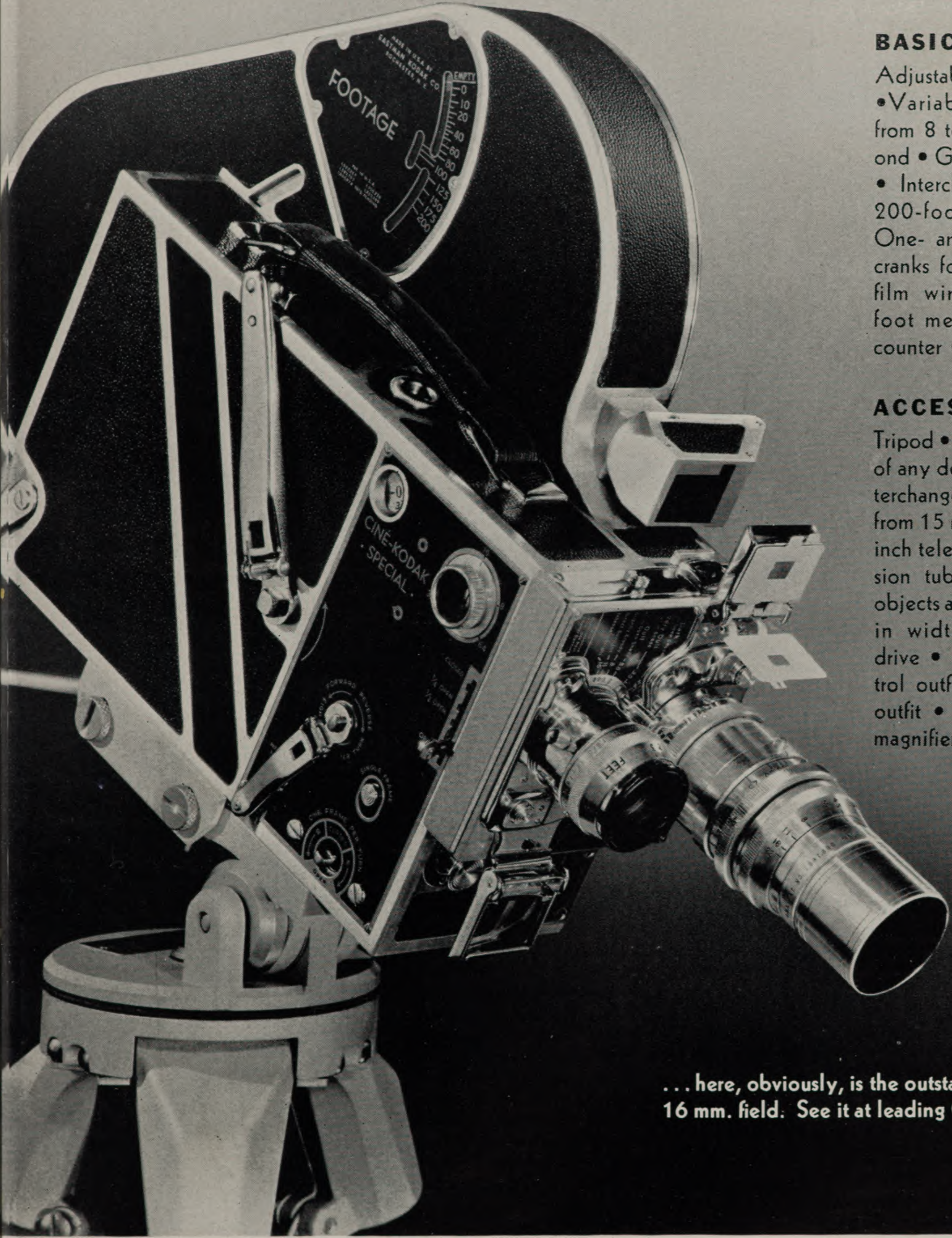

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. . . here, obviously, is the outstanding camera in the 16 mm. field. See it at leading Ciné-Kodak dealers'.

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Positive film for titles, 16mm double perforated for use in double 8mm cameras, $1.00 per 25-foot roll. Includes later free development and return. Same film, no development, 55c per roll. Postpaid Ohio orders add 3% sales tax.

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HERE'S HOW

By A.S.C. Members

In the July, 1935 issue of American Cinematographer, on pages 306 and 316 there is an article on "Home Reversal Development of Movie Film." I would like to have a little information on the part appearing on page 316 covering "Printing Method."

1. You state there that only same exposure is needed when using positive as is used when using pan film. I do not find this true unless there's something I do wrong because I get a very dark picture as though under-exposed. Should not one or two stops more be used when using regular positive stock?

2. Also in event of under-exposed film, what one of the processes will take care of this? On an under-exposure should the films be left in the first development longer or shorter, or should it be kept under the flashing light longer or shorter, or should the last development time be varied?

3. Also as to the D-76 Developer, should this be used full strength on the first development and for how long?

4. I also find that the emulsion side of the film has a sort of brownish cast to it when completed. Is this caused by the acid-stop-bath or what? And how can it be eliminated?

—R. J. Daughterty.

In your question No. 1 you say that our article states that same exposure can be used on positive as is used for pan film. If you will read further, you will notice that it says "when you have blue light." This, of course, is true because the basic sensitivity of all film is in the blue. In other words, the silver grains are sensitive to blue only and all film must have the silver in the emulsion, so if you used pan film and had only blue light it would not be any faster under those conditions than positive film. If you have any shadows in your picture it is natural that positive film will go very dark as there is very little blue light in shadows. Also if you have a green background, the green will go dark. Shoot positive film about two stops wider open than pan.

Question No. 2: When your film is under-exposed it is better to carry it a little further in the first development. Your greatest control is in the first development.

Question No. 3: Use the D-76 Developer full strength in the first development. The length of time is going to be controlled by the exposure you gave the film in your camera as explained in the answer to your question No. 2.

Question No. 4: The reason you are getting a brownish cast on your emulsion side is that you do not wash the film long enough after taking it out of your acid-stop-bath. Each washing operation should be not less than five minutes in water that is flowing vigorously.

—A.S.C.

During the past several years I have printed 16mm pictures for a very good customer of this laboratory. I have used Dupont 16mm positive film for these prints.

Sometime ago this customer notified me that my prints wouldn't feed well through their R.C.A. sound projectors. An investigation showed that the developed film was of much different size than undeveloped material, due to expansion during development and shrinking during the drying process.

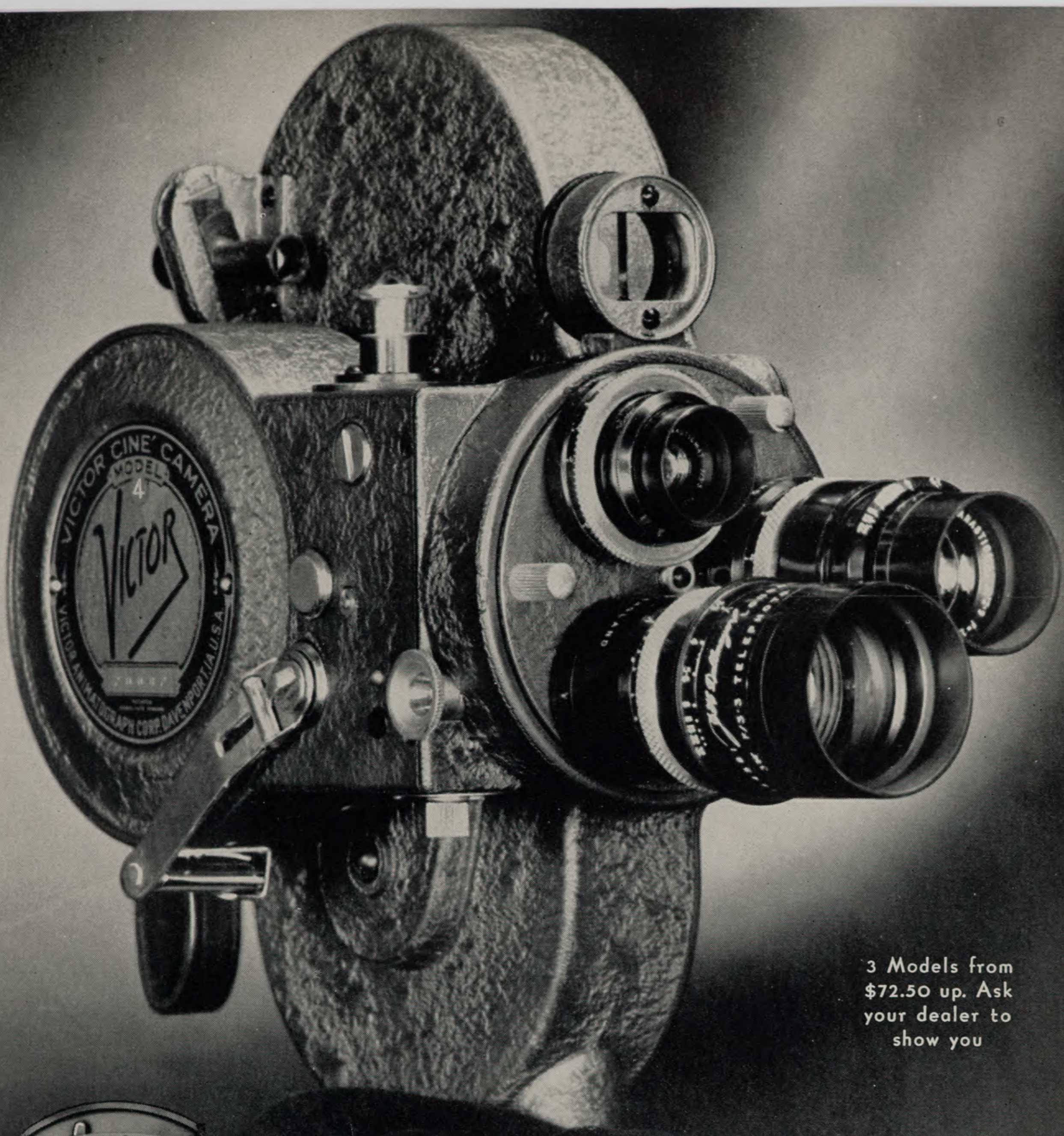
The next order was handled with great care, especially in the removing of excess water from the film previous to drying, and during the drying time. I projected every one of the prints in my Filmo projector and they went through all right, but again the customer complained that the prints gave them trouble in the projector.

I tried a Chrome alum stop bath recommended by Dupont, but it did not seem to remedy the condition according to the report from my customer.

I have exhausted all experimentation possibilities; can you suggest any remedy for me.

—A. Manrique.

It would not be fair to say that any one brand of safety film will stretch or shrink more than another. According to reports we have received from reliable laboratories making 16mm positive prints it would seem that it is reasonable to expect the film to stretch to such an extent that the distance between perforations is .304". As you know the distance between the sprocket holes in 16mm film is .300". We have heard of



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LEICA, CONTAX, ROLLEFLEX,
EXAKTA and other cameras at
Morgan Camera Shop
6305 Sunset Blvd., Hollywood, Calif.

this film shrinking to .292" between sprocket holes.

It is the contention that the pull down claw on projectors should have a stroke to make contact with the sprocket when the stretch has a maximum of .304" between sprockets. If it is less than this, the claw will naturally ride on the film until it contacts the hole and then pull the film down.

You might check the particular projector to determine the pull down stroke. It may be out of adjustment. Also if it is the type that has a double claw it may be possible that one claw contacts the hole and the other claw rides on the film. This would create a pressure in the gate.

There is very little we can do about the stretching and shrinking of acetate film. We must have safety film for use in commercial and home work and therefore the manufacturers of projectors endeavor to build in a "factor of tolerance" so as to take care of this condition.

Notes on Nautical Filming

Continued from page 304

ruins of Old Panama, or the skyline of New York, study the scene to determine the best method available to get the finest results possible under the prevailing circumstances. When taking "long shots," always give consideration to improvement which addition of suitable foreground might make. If your friends or shipmates constitute the foreground, having them look at the point of interest you are photographing and not at the camera, will usually give a better composition from a pictorial standpoint.

Outstanding photographs are made by looking after every detail, no matter how trifling. It is appropriate to recall the words of Michael Angelo, "Trifles make perfection—and perfection is no trifle." Make this motto of the Old Master your guiding star and watch how the quality of your movies improves.

What to Shoot at Texas Centennial

Continued from page 302

the cause of the beginning of the end of Texas' fight for her independence from Mexico.

While you're in San Antonio, a city which its Chamber of Commerce has named the "Winter Playground of America", you will delight in the Mexican quarters, the street venders of pralines, the peculiar intermingling of the bustle of Northerners and the sleepy indifference of the Mexicans. And trees—lovely, spreading, heavy shade trees and moss.

Houston, the largest city of Texas, both numerically and in point of land covered, is famous for two things for the filmer. First, historically, is the San Jacinto Battleground, twenty miles down the ship channel from Houston. It was on this historic spot that the wounded Houston won Texas' independence, and the place fairly reeks with the ghosts of the brave men who won our independence.

About fifteen years ago business men of Houston, aided by Federal grants, built the Houston ship channel. It was built to allow the biggest ocean-going vessels to come some 50 miles inland, and in '28 and '29 I've seen tankers, freighters, and passenger vessels forming a veritable parade up and down the channel. At places, for instance at Morgan's Point, the boats look as if they were sliding on the land, for the channel is a bit narrower there.

Houston is more like Los Angeles than any other place I've seen. It's clean, has wide streets, and goes in for tricky hotte dogge shoppees and fine cars. And it has the most modern busses in the country.

At Houston also is one of the most beautiful universities in America. I might be a bit prejudiced because it is my alma mater, but if you see Rice Institute while you're in Houston, you are in for a beautiful sight. Not only are the buildings beautiful, but the year-round moisture in that climate makes it possible for the gardener to make a flower paradise.

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new to film, you can't go wrong if you tour Texas this year. From the endless plains of West Texas to the Piny Woods of East Texas, and from the high cattle country of the Panhandle to the invitingly cool Gulf, Texas is yours to enjoy. And to enjoy reliving thru your movies. If this article seems to smack too strongly of local Chambers of Commerce, please pardon it. But honestly, you'll love the filming opportunities Texas offers you especially this year. Take it from one who is not native born, yet who loves the Big State, you simply must fill your film album with myriads of colorful shots of the Southwest.

SELECTIONS IN COLOR

Continued from page 306

told. Nothing much happened; people appeared now and then, but what they did was of no consequence. Where they were, what they saw, was everything. The delicate pastel-tinted creams, buffs and blues of the fumaroles—the amazing reds, purples and whites of Zion Canyon—the rainbows flickering in "Old Faithful's" snowy white spray—the unbelievable blue of Crater Lake: the story there was color, and it had to be told on the screen with color.

Not all of us, though, can start a vacation planning to bring back two or more separate productions. If we shoot any color, it must be used as part of a black-and-white picture. Esthetically, this may be all wrong, but budgets usually overrule esthetics, even in professional filming. With the proper selection of subjects, and intelligent editing and titles, color can be used very successfully to add a "punch" of eye-appeal to important parts of a picture.

The first thing, of course, is to plan the camera's itinerary so that the color-shots can be grouped into definite sequences, each of which climaxes a certain part of the story. Best of all, hold the color for the climaxing sequence of the picture, if you can. And plan your continuity so that the transitions from black-and-white to color won't be too startlingly abrupt.

An excellent recent example of this type of picture was "Southwestern Wonderlands," photographed by John F. Criswell. The "story" of this picture was a tour of the National Parks in the Southwest—Zion Canyon, Bryce Canyon, Cedar Breaks and the Grand Canyon. About a quarter of the film's four hundred feet was in Kodachrome. In each case, the color marked the climax of that particular part of the picture. The "story" would be developed as far as possible in black-and-white, and then a title would hint at the glorious display of color in that region—and Kodachrome would take up the thread of the story until a definite change of thought led to the next episode. In every instance, the descriptive titles were made on cards decorated with simple pen-and-ink sketches of the scene which was to be shown thereafter. In some instances, the last black-and-white scene of a sequence would be either a duplicate of the succeeding color-shot, or of a very similar scene. Thus the audience was prepared for the color when it came; color was something expected—something necessary, rather than an abrupt surprise.

In any color-filming, there are certain basic rules to the game. Experienced black-and-white filmers have learned, for instance, that a person near the camera will dominate one farther away; that a person in the sunlight will dominate one beside him, but in the shade; that a person clad in white will attract attention from one clad in gray or black clothes.

Much the same sort of thing applies in color-filming, too. A bright color

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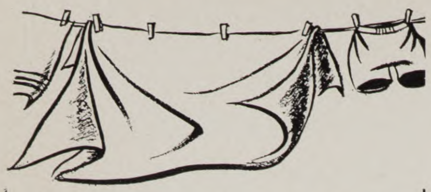

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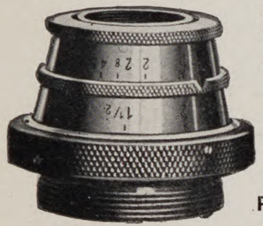

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will almost always dominate a soft or neutral-colored object. Certain colors—especially reds and blues—are particular "scene-stealers". In black-and-white, a moving object will almost always draw your attention from one that is motionless: but in a color scene, a strongly red or blue object, whether or not it moves, will pull your eyes away from a far larger moving object or person. One of my earlier color-scenes is a medium-shot of a very pretty girl under a tree; composition and lighting favor the girl's face, but there is a patch of sky showing through the tree which shows up unexpectedly blue in the distance—and though I've run the scene a hundred times, I can never keep my eyes from rushing unbidden to be irritated by that unnatural bit of sky!

The softer color-renderings are therefore vastly preferable in a color-film. It is nice, of course, if you can get these by selecting the right subjects; but if you can't, the camera can often help you. Underexposure tends (up to a certain point) to brighten colors; overexposure tends to soften them. So if you want soft tones in your picture, deliberately overexpose a bit. A degree slower on your meter's film-speed setting will generally suffice.

Another useful trick is to take advantage of the narrower latitude of color emulsions. There is far less range between correct exposure and dead-black underexposure than in black-and-white, so by keeping unwanted strong colors in the heavy shadows, you can virtually eliminate them.

ALL THE FAMILY IS IN THIS SCENARIO

Continued from page 307

The unoccupied green. Uncle strides in from camera, stops, searches the scene for ball. Then, unbelieving, walks to cup and peers in.

SCENE 23: CLOSE SHOT. Uncle discovers the miracle. A hole-in-one! With hand lifts ball from cup.

SCENE 24: MEDIUM SHOT. Uncle doing a wild Indian dance on the green in celebration of every golfer's ambition materialized. DISSOLVE TO—

SCENE 25: CLOSE-UP. Uncle. (Continuation of Scene 18.) A ghost of a smile comes to his face. A far-away gleam to his eyes.

SCENE 26: CLOSE-UP. Aunt's face in listening pose. DISSOLVE TO—

SCENE 27: MEDIUM SHOT of bridge foursome at table. Aunt is facing the camera.

SCENE 28: CLOSE SHOT from same direction but higher camera angle, shooting down. On the table before Aunt, in neat stacks, are twelve tricks. One card remains in her hand. She plays it to the table. Three other cards flutter down. Aunt gathers in the trick. Her hand counts and we see the seven odd tricks—a grand slam.

SCENE 29: CLOSE-UP. Aunt's smiling triumphant face. DISSOLVE TO—

SCENE 30: CLOSE-UP. Aunt. (Continuation of Scene 26.)

SCENE 31: CLOSE-UP. Sister's face. DISSOLVE TO—

SCENE 32: MEDIUM SHOT. Exterior of motion picture theater. The program is placarded, or a flaming poster is visible. Sister enters and studies it, moves to right.

SCENE 33: MEDIUM SHOT. Cashier's booth at movie theater. Sister enters from left to window, buys a ticket, exits to theater entrance. DISSOLVE TO—

SCENE 34: CLOSE-UP of Sister. (Continuation of Scene 31.) A longing, wistful expression comes over her face.

SCENE 35: CLOSE-UP of Brother's face, absently staring at piano. DISSOLVE TO—

SCENE 36: LONG SHOT at baseball or football field, or Brother diving into a swimming pool, or other favorite pastime. DISSOLVE TO—

SCENE 37: CLOSE-UP. Brother. (Continuation of Scene 35.) He fidgets restlessly.

SCENE 38: CLOSE-UP. Father's face. DISSOLVE TO—

SCENE 39: CLOSE SHOT. Father seated at desk or table. Before him are collection of monthly bills and an open checkbook holding one check which he is signing. He tears it from book, places it with one of the bills.

SCENE 40: CLOSE-UP. Open checkbook on desk. Father's hands take it up, open it to last stub. On this stub we can read (use an INSERT if necessary) the inscription: Balance, $0.13.

SCENE 41: CLOSE-UP of Father's worried face, at the desk. DISSOLVE TO—

SCENE 42: CLOSE-UP of Father's face. (Continuation of Scene 38.)

SCENE 43: CLOSE-UP of family Dog. Sitting, looking into camera at his level. DISSOLVE TO

SCENE 44: CLOSE SHOT of Dog in yard gnawing on huge bone. DISSOLVE TO—

SCENE 45: CLOSE-UP of Dog's head. Possibly you can get him to lick his chops. (Continuation of Scene 43.)

SCENE 46: CLOSE-UP of Daughter's hands fingering the piano keys. (Continuation of Scene 7.) With an impressive gesture, they reach the conclusion of the concerto and lift above the keyboard.

SCENE 47: MEDIUM SHOT. Daughter has finished her performance. She turns and rises from the piano bench, leaves it.

SCENE 48: LONG SHOT of the guests. (Continuation of Scene 8.) Mother's face wreathes in smiles, she applauds vigorously. Abruptly, as though brought face to face with sudden reality, the other listeners snap into set smiles and polite handclapping.

SCENE 49: MEDIUM SHOT, as in Scene 9, PANNING from left to right and catching the many expressions, to the DOG.

SCENE 50: CLOSE-UP. Dog's head. He is barking enthusiastically.

FADE OUT.

Here you have a different type of film, covering quite a range of visual activity, with a bit of Eugene O'Neill flavor. The dissolves show what each person is thinking under the piano's spell. It comes well within the impressionistic category, yet is good fun. Give more rehearsal than usual to your characters so as to get just the right expressions in your close-ups.

If Story is Not the Thing, What Is?

Continued from page 303

dios. This man, still bewildered and astonished by it all, takes it all in and is quick to take advantage of it, only to turn out a list of flops, then to hit it again by accident. This because very few men are able to oversee the filmic structure and possess a complete and intimate knowledge of the filmic laws and how to apply them.

Making pictures is not a hit or miss process, as Hollywood is prone to make one believe, and the sooner this is realized the sooner will it be able for Hollywood to raise the percentage of successful pictures.

But it is impossible, as yet, for Hollywood to discard the hit-or-miss process of picture production because it disregards entirely the ultimate aim and appeal of pictures and does not possess the ability to correctly analyze this aim and appeal due to its preference to staring itself blind on the superficialities of the picture-production process.

In my following article entitled, "The Film is Not the Thing," I shall analyze and describe the ultimate aim of pictures.

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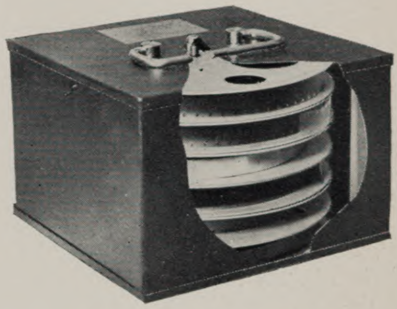

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Do Your Cutting Right in the Camera

Continued from page 305

Close-ups of the speckled beauties sizzling in the pan, with hungry-mouthed fishermen lurking around in close-ups add to the completeness of your filmic answer, while for a fadeout, a close shot of the fish being eaten is streets ahead of the conventional sunset.

Eliminating the alibis for subject-matter, there is still quite a bit of room for waste film in the shots that are NG'd for bad photography or useless action. These things can't always be avoided, even by the best of us; but the possibility of their happening can certainly be reduced.

In these days of fast lenses and accurate exposure-meters, errors in exposure should be close to the vanishing point. If experience hasn't made correct exposure almost second nature, by all means use a meter. The less thought you have to give to the mechanics of running the camera, the more will be left for selecting truly telling action. That goes for filtering, lighting and the rest of the technicalities, too.

Camera-movement is a chapter unto itself. Most vacation-films are injured by careless panning and tilting. There should be a legitimate reason for every move of the camera. Generally speaking, if you have to move your head to take in the full meaning of the scene as you see it, the camera should pan or tilt in filming the scene; if you see the really important part of the scene without moving your head, the camera had better be held stationary. When you do move the camera, make sure that the beginning and end of the move are dictated by more than mere happenstance. And remember—always pan slower than what you think is too slow. It'll still be too fast on the screen, for even with a normal lens, the camera looks at a scene as through a field glass!

As for camera angles, if your vacation film is of the "where" variety, stick to the longer shots. If it is of the "what" type, only the closer, more intimate shots can fully reveal the "what."

The human factor—the folks you photograph—can often waste a lot of film if you don't plan otherwise. Very few of us, especially the sort of folks that go places with cinamateurs, are intentionally ridiculous in front of a camera. The silly capers most vacation subjects cut can almost always be traced to the fact that the victim is embarrassed, and doesn't know what to do with himself. Given something definite and natural to do, even the clumsiest half-wit can act reasonably human.

Gus is on his vacation now. If he remembers that his vacation movies must restrict themselves to saying "where" or "what," giving his people something definite to do, and using ordinary commonsense in the mechanics of movie-making, he can literally edit his film as he shoots it, cutting out the mistakes and apologies before they reach celluloid. I think his friends are going to get a lot more pleasure out of seeing his films when he gets back—and I know he'll be happier showing good, purposeful pictures.

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